EFFECTS OF YOGIC PRACTICES ON LEUCORRHOEA AMONG THE SCHOOL GIRLS

A Project work submitted to the

Bharathidasan University, Tiruchirappalli,

in partial fulfillment of the requirements for the award of the

MASTER OF SCIENCE IN YOGA

By

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27. 04. 2007

CERTIFICATE

This is to certify that the project work entitled **"Effects of yogic practices on leucorrhoea among the school girls "**. Submitted to Bharathidasan University, in partial fulfillment of the requirements for the award of **Master of Science in Yoga**, is a record of original project work done by **E. Jayapriya** (**Reg. No. P0 5640002**), during the period of his study in the Yoga Centre, Department of Physical Education, Bharathidasan University, Tiruchirappalli- 620 024. Under my supervision and guidance. The report has not been presented for the award of any degree/ Diploma/ Associateship/ Fellowship/ or other titles to any other candidate of any university. Also certify that the report represents entirely on independent work on the part of the candidate.

Signature of the
Head of the Department

Signature of the Guide

DECLARATION

I hereby declare that the project work report entitled " **Effects of yogic practices on leucorrhoea among the schoolgirls ".** Submitted to Bharathidasan University in partial fulfillment of the requirements for the award of **Master of Science in Yoga** is a record of original project work done by me, under the supervision and guidance of **Department of physical Education and Yoga centre Bharathidasan University, Thiruchirappalli-620 024** and the report has not formed for the award of any degree, diploma/ Associateship/ fellowship or similar titles to any other candidates of any university.

Signature of the Adviser

Signature of the Candidate

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INTRODUCTION

Man has stepped into the third millenium. Medical men are working with many technologists to offer better health care. World health organisation is engaged in taking stock of global health status and taking necessary steps to raise the health standards. Scientific aptitude that entered medical profession in the begining of 20^{th} century made rapid strides in eradicating epidemic and pandemics, through invention of antibiotics and vaccines. Although nutritional deficiences and infections continue to be the major problem in the under developed countries is totally different. Yoga is a becoming popular in all parts of the world. For the restless mind it gives solace. For the sick, it is a boon. For the common man it is the fashion of the day to keep himself fit and beautiful. Some use it for developing memory, intelligency and creativity. With its multifold advantages it is becoming a part of education. Specialists use it to unfold deeper layers of consciousness in their move towards perfection. Because of its rational basis, the modern medical system has replaced almost all-traditional systems of medicine indifferent parts of the globe. It has proved itself most effective in saving man from the fatal hands of contageous and infectious diseases. However, new widesspread psychosomatic ailments and psychiatric problems are posing a great challenge to the modern medical system. It is here that Yoga is making a vital contribution to the modern medical system.

1.1. FEMALE REPRODUCTIVE SYSTEM

Female Reproductive organs are divided into external and internal organs. **External Genitalia** are known collectively as vulva,

- Labia majora
- Labia minora
- Vaginal orifice
- Clitoris
- Vestibule
- Hymen
- Vestibular glands (Bartholin`s glands)

- **Labia Majora**—These are the two large folds which form the boundary of the vulva. They are composed of skin, fibrous tissue and fat and contain large number of subaceous glands. At puberty hair grows on the lateral surfaces of the Labia majora.
- **Labia Minora -** These are smaller folds of skin between the Labia majora, containing numerous sebaceous glands.
- **Clitoris -** The Clitoris corresponds to the penis in the male. It contains sensory nerve endings and erectile tissue. It has no reproductive significance.
- **Hymen -** It is the thin layer of mucous membrane which partially the opening of the vagina. It is normally incomplete to allow for passage of menstrual flow.

Vestibular Glands - The vestibule glands are situated on each side near the vaginal opening. The size of a small pea and have ducts, opening into the vestibule immediately lateral to the attachment of the hymen. They secreate mucus that keeps the vulva moist.

Internal Genitalia

The Internal organs of the Female reproductive system lie in the pelvic cavity and consist of

- Vagina
- Uterus
- Two uterine tubes
- Two ovaries

Vagina

Anatomy of vagina—The vagina is a fibro muscular tube lined with stratified squamous epithelium, connecting the external and internal organs of reproduction. It runs obliquely upwards and backwards at an angle of about 45 degree between the bladder in front and rectum and anus behind. In adult the anterior wall is about 7.5cm[3 inches] long and the posterior wall about 9cm long. The difference is due to the angle of insertion of the cervix through the anterior wall.

Structure of vagina—Vagina has three layers, an outer covering of areolar tissue. A middle layer is smooth muscle. An inner lining is stratified squamous epithelium or rugae. It has no secretary glands but the surface is kept moist by cervical secertions. In between puberty and the menopause, Lactobacillus acidophilus bacteria are normally present. This bacteria secreated Lactic acid, which is maintaining the PH between 4.9 and 3.5. The acidity profits the growth of moist other microbes that may enter the vagina from the perineum.

Fuctions of the Vagina—The vagina acts as the receptacle for the penis during coitus, and provides an elastic passageway through which the baby passes during childbirth.

Uterus

Anatomy of Uterus—The Uterus is a hollow muscular pear-shaped organ, flatened anterior posteriorly. It lies in tyhe pelvic cavity between the urinary bladder and the rectum. When the body is in the upright position the uterus lies in an almost horizontal position. It is about 7.5cm long, 5cm wide and its walls are about 2.5cm thick. It weighs from 30 to 40grams. The 3 part of uterus is **fundus-**The dome-shaped part of the uterus. It is the openings of the uterine tubes. **Body-**It is narrowest inferiorly at the internal os. It is continous with the cervix. **Cervix** [neck of the uterus]**-**This is protrudes through the anterior wall of the vagina, opening into at the external os.

Structure of Uterus—The walls of the uterus is composed of three layers of tissue. **Perimetrium** is distributed differently on the various surfaces of the uterus. **Myometrium** is the thickest layer of tissue in the uterine wall. It is mass of smooth muscle fibres interlaced with areolar tissue, blood vessels and nerves. **Endometrium** consists of columnar epithelium containing a large number of mucus secreting tubular glands. It is divided fuctionally into two layers are fuctional layer (or) upper layer and basal layer.

Supports of the Uterus—The Uterus is supported in the pelvic cavity by surrounding organs, muscles of the pelvic floor and ligaments that suspend it

from the walls of the pelvis. The ligaments are Broad ligaments, Round ligaments, Uterosacral ligaments and transverse cervical ligaments (cardinal ligaments).

Fuctions of the Uterus—After puberty, the endometrium of the uterus goes through a regular monthly cycle of changes, the menstrual cycle, which is under the control of hypothalmic and anterior pituitary hormones. The purpose of the cycle is to prepare the uterus to receive, nourish and protect a fertilised ovum. The cycle is usually regular, lasting between 26 and 30 days. If the ovum is not fertilised a new cycle begins with a short period of bleeding.

If the ovum is fertilised the zygote embeds itself in the uterine wall. The uterine muscle grows to accomodate the developing baby. It is called embryo during its first 8 weeks and a fetus for the remainder of the pregnancy. Uterine secretions nourish the ovum before it inplants in the endometrium and after implatation the endometrial cells themselves nourish the rapidly expanding ball of cells.

Uterine tubes (Fallopian tubes**)**

Uterine tubes are about 10cm long and extended from the sides of the uterus between the body and the fundus. They lie in the upper free border of the broad ligaments and their trumpet-shaped lateral ends penetrate the posterior wall opening into the peritonial cavity close to the ovaries. The end of each tube has fingerlike projection called fimbriae.

Ovaries

The ovaries are the female gonads, or glands, and they lie in a shallow fossa on the lateral walls of the pelvis. They are 2.5 to 3.5 cm long, 2 cm wide and 1 cm thick. Each is attached to the upper part of the uterus by the ovarian ligament and to the back of the broad ligament by the broad band of tissue, the mesovarium.

Structure of ovaries -The ovaries has two layers of tissue. **The medulla** lies in the center and consists of fibrous tissue, blood vessels and nerves. **The cortex** surrounds the medulla. It has a framework of connective tissue, or stroma, covered by germinal epithelium. It contains ovarian follicules in various stages of maturity, each of which contains an ovum.

Fuctions of the ovaries—Maturation of the follicle is stimulated by follicle stimulating hormone from the anterior pituitary, and oestrogen secreted by the follicle lining cells. Ovulation is triggered by a surge of luteinising hormone from the anterior pituitary, which occurs a ferw hours before ovulation. After ovulation, the follicle lining cells develop into the corpus lueteum, under the influence of LH from the anterior pituitary. The corpus luteum produces the hormone progesterone and some oestrogen for the first 3 months of the pregnancy after which time this fuction is continued by the placenta. If the ovum is not fertilised the corpus liteum degenerates and a new cycle begins with menstruation.

Puberty in female—Puberty is the age at which the internal reproductive organs reach maturty. The age of puberty varies between 10 and 14 years and number of physical and psychological changes take place at this time.

Tbe Menstrual cycles—This is a series of events, ocuring regularly in females every 26 to 30 days throughout the childbearing period of about 36 years. The cycle consists of a series of changes take place concurrently in the ovaries and uterine walls, stimulated by changes in the blood concentrations of hormones. The hypothalamus secretes luteinising hormone releasing hormone which stimulates the anterior pituitary to secrete follicle stimulating hormone, which promotes the maturation of ovarian follicles and the secretion of oestrogen, leading to ovulation.

Luteinising hormone, which troggers ovulation, stimulates the development of the corpus luteum and secretion of progesterone. The hypothalamus responds to changes in the blood levels of oestrogen and progesterone. It is switched off by high levels and stimulated when they are low. The average length of the menstrual cycle is about 28 days. By convention the days of the cycle are numbered from the beginning Of the menstrual phase of the menstrual cycle which usually lasts about 4 day.

1.2. WOMEN AND LEUCORRHOEA

Leucorrhoea, vaginal discharge is a universal problem of all women. No body escapes from this illness. Female genitals are very much prone to infections since they are moist, more sweaty and covered. The white vaginal discharge with foul smell makes it embrassing to get into social gatherings and even engage in personal affairs. The affected women need reassurance, prevention of infection and some counselling as they usually have abnormal psychosomatic scores.

What is Leucorrhoea?

Leucorrhoea, commonly known as whites, refers to a whitish discharge from the female genitals. Leucorrhoea is an abnormal condition of the reproductive organs of women. If not treated properly in the initial stages, it may become chronic. Recent investigations have shown that secretions from the uterus and upper part of the vagina flow down and are reabsorbed in the lower parts of the vagina. This is the normal constant flow within the female organs. The whitish discharge is, however, caused by the presence of infection in any of these tissues and a variety of other factors. Leucorrhoea condition may continue for weeks or months at a time.

Causes of Leucorrhoea

It is generally caused due to unhygienic conditions and microbial infection in female genital tract. Weak body immunity is also an important factor in cause of leucorrhoea. Leucorrhoea does not develop suddenly in an acute form. It denotes a devitalised and toxic condition of the system generally. The condition also involves one or many parts of the reproductive organs. Whenever the body is loaded with toxins due to wrong dietary habits and the eliminative organs such as skin, bowels, lungs, and kidneys are unable to eliminate the toxins, the body produces a profuse discharge or elimination through the mucus membrane of the uterus and vagina in the form of leucorrhoea. In the case of advanced, chronic inflammatory conditions of these organs, it leads to discharge with pus, offensive in odour and colour

Leucorrhoea usually shows symptoms in association with other illness. Wide varieties of reasons are encountered in its causation. Commonly **fungal, parasitic, bacterial** and sexually transmitted diseases are the prime causative factors.

Fungal infection

Fungal infection caused by the growth of a fungus, Candida albicans in vagina. It is not usually sexually transmitted although it can be. It is generally caused by an imbalance of the normal vaginal flora. The vagina normally contains a certain amount of yeast and harmless bacteria, but if this balance is interrupted, the yeast may overgrow and cause inflammation of the vagina. An imbalance in vaginal flora can result by pregnancy, diabetes, birth control pills, antibiotics and douching. It is also believed that stress, a decreased immune system and excess vaginal moisture that are often caused by wearing synthetic underwear can contribute to a yeast infection.

Symptoms

Usually the woman notices a thick, curdy-white discharge. They could also notice a thinner, milkier-white discharge. Moderate to severe itching is present. The labia and vulva may be swollen and red. The skin may be sensitive to touch and the women may experience coition to be severely painful.

Parasitic Infection

Trichomoniasis is a vaginal infection caused by the protozoa, Trichomonas vaginalis. It can be found in both men and women. Trichomoniasis is usually transmitted by sexual intercourse, but is also transmitted by common washing of clothes, towels, bathing suits, underwear or any moist object.

Symptoms

Usually the woman complains of a thin, yellow to grey vaginal discharge which is often foamy and has an unpleasant odour. There may be some itching and redness noted around and inside the vagina. Some women and men do not show

symptoms at all. It is important that if your partner is treated for Trichomoniasis, you as well get treated.

Bacterial Infection

Bacterial vaginosis is a vaginal infection often caused by variety of bacteria like Gardnerella vaginalis, Mycoplasma hominis or various other bacteria. It is caused by any bacterial contact with the vagina, whether from sexual intercourse or improper hygiene. Frequently, sexually transmitted diseases like gonorrhoea, syphilis, AIDS and chlamydia also cause white discharge.

Symptoms

Usually the woman notices a thin white to yellow discharge that has a unpleasant fishy odour. The discharge can be slight to excessive, yet the odour is always present and more noticeable after sexual intercourse. There may be vaginal itching and pelvic tenderness.

General Symptoms of Leucorrhoea

The whitish discharge from the vagina, the patient of Leucorrhoea feels weak and tired. She also suffers from pain in the lumbar region and the calves and a dragging sensation in the abdomen.

- Whitish discharge from vagina
- General body weakness
- Pain in the lumbar region and calves
- Frequent headaches
- Constipation

- Intense itching
- Development of black patches under the eyes

Leucorrhoea in young girls

In young girls, leucorrhoea may occur during the few years before and after the start of the menstrual flow. It may be due to an irritation of the genital organs caused by various factors such as dirt, soiled under garments, intestinal worms and excessive mental stimulation of sex or masturbation. Some excess secretion is normal when the girl reaches puberty, due to overactivity in her sex glands and organs. This usually disappears within a short time. In your women, leucorrhoea may occur during intermenstrual periods, due to thickening of the mucous membrane in the reproductive organs. Such a discharge is associated with painful menstruation and other menstrual disorders.

1.3. YOGA

Yoga is an art of living and science of knowledge, In this modern world, moral things are got great pause, because of invade of materialistic and luxury life style followed from western countries, but India has possessed moralities, and crossed infinite number of sages. The great things are revealed from the India, by great sages and Rishis, that revealed things consists of many philosophies, some of them as follows.

1. Sankhya - Kapila
2. Yoga - Patanjali
3. Nyaya - Goutama
4. Vaisesika - Kanada
5. Purva Mimamsa - Jaimini

6. Uttara Mimamsa - Badrayana

Above mentions these six philosophies collectively called “Saddharsana”. But the Yoga is one of the oldest philosophy out of six orthodox systems. Yoga is the practical philosophy based on scientific and theoretical observations. It can benefit for human beings who are they following properly and systematically by the guidance of the eminent Guru. Maharshi Patanjali is the first codifier in the yoga field who has lived about 2,300 years back, he codified the total yogic philosophy as yoga sutras that is called as “Patanjali Yoga Sutra”. It consists of four (Padas) chapters with 196 aphorisms.

1.4. Meaning of yoga

Maharshi Patanjali compiled the Yoga Sastra in the meaning of “Samadhi”. The word Yoga is derived from the Sanskrit root word “Yujir” and “Yuja”.

“Yujir Yoge; and yuja Samadhou”

“Yujir" means to join, "yuja" means Samadhi. To join means combine together two aspects that is individual soul and the supreme soul. The yoga sastra emphasized and leads to learn control of mind from its modifications by this way it leads to achieve Samadhi and breaks the cycle of birth and death finally it gives liberation to the individual soul (‘jivatma’) to join with supreme soul (‘paramathma’).

1.5. Definitions of yoga

Yoga has defined some of the classical texts like vedas, upanisads, Bhagavadgita, Patanjali Yoga Sutra etc. Some of the definitions are mentioned above classical works are as follows.

"Yogacitta vrtti nirodhah" **[PYS – I: 2]**

The process of Yoga means restraining the mind modifications, if the mind from infinite thoughts. By the practice of Yoga one can control and stop the thoughts and finally one can arrest completely from infinite to only one thought then it leads to nil.

"Tam vidyat duhkha samyoga viyogam yoga samjnitam" *[B.G. – 6:23]*

Restraining the worldly objects, which gives great attachment and pains that itself the deepest stages of yoga.

"Siddhya sidhyoh samo bhutwa Samathvam yogamucyate" *[B.G.-2:48]*

Treating success and failure as same feeling or mood that evenness of the mind is called Yoga.

"Yogah karmasu kausalam" *[B.G.-2:50]*

Equanimity of mind brings free from likes and dislikes, attachment and aversion. Then he is a Yogi, in this stage there is no new karma accrues to him. The momentum of the old karma wines away. He gains in perfecting the mind.

1.6. Schools of yoga

There are different schools of Yoga but all yogic path leads to liberation only, the selection of path defers from one to another person according to mental temperament. Various types of schools are as follows,

1. Jnana Yoga
2. Karma Yoga
3. Bhakti Yoga
4. Raja yoga
5. Hatha Yoga

Jnana Yoga

Jnana means knowledge by which we are acquiring from the eminent Guru and gained from the Vedas, vedantas, upanishats and philosophies from the scholars. One who is using above mentioned knowledge to attain or realize the Atman or self. He is called as Brahmajnani. The following four characters are should acquire to become as a Brahmanjnani or Jnana Yogi.

1. Viveka - Discrimination from real and unreal things.
2. Vairagya - Detachment.
3. Shatka Sampatti (Six good qualities)
    (a) Sama - Calmness of mind
    (b) Dama - Restraint of the senses from its objects
    (c) Uparati - Satiety
    (d) Titiksa - Power of endurance or sustaining against difficulties
    (e) Sraddha - Faith
    (f) Samadhana - One pointedness of the mind.
4. Mumuksatva - Intense clinging for liberation.

Karma Yoga

The word karma is derived from the Sanskrit root"kru" that means doing. The Bhagavadgita says,

Karmanye va dhikaras te ma phalesu kadacana /

Ma karma phala hetur bhur ma te sango stv akarmani // *[B.G.- II – 47]*

You are having rights to do work which is allotted to you then there is no rights to get the fruit from the work, you are not responsible for your work to get the results, But one should not go for actionless mood also. So that one should work always without any selfishness. Who is doing his duties without any attachments that leads to attain the supreme means the individual soul starts to join towards supreme soul. Who is controlling the organs of sense and action by the power of his will and who is doing his duties with controlled sense and action organs. Then he is called as Karma Yogi.

Patanjali also defined in his yoga sutras about karma yoga.

"Tapas swadtyaya Iswara pranidhanani Kriya Yogah" *[PYS-II-1]*

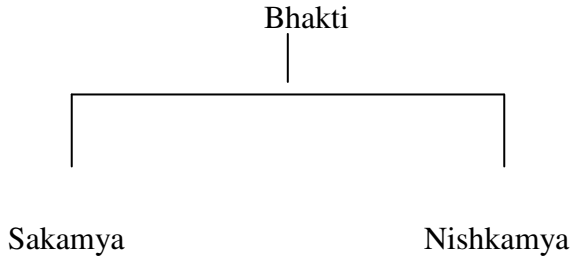
We are getting benefits what from the strict austerities that is called, tapas and the great knowledge from the holy texts or scriptures that is called Svadhyaya these things we should not consider that we got because of my strict practice and great effort only instead of we should surrender the fruits, what we got from the tapas and svadhyaya that also from the God only that is called Iswara Pranidhana. So following

Iswara pranidhana against the selfishness and following selflessness is called Kriya Yoga on Karma Yoga.

Bhakti Yoga

The word Bhakti derived from the Sanskrit root "Bhaj" which means to be attached to God. The Bhakti Yoga says “Parama prem Rupa” which means “Love is God”. The pure love without any expectation in between the diety and devotee is called Bhakti. Who is having bhakti towards the diety, he is called Bhakta (on) Bhakti Yogi.

Types of Bhakti



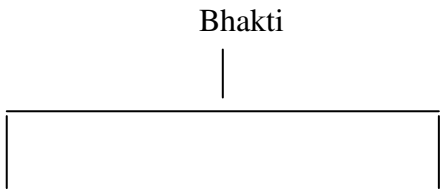
Sakamya Bhakti

Sakamya means bhakti towards the God to get something as a fruits.

Ex: Wealth, freedom from diseases, fame etc. But this type of bhakti will not give satisfaction and moksha to the Bhaktha.

Nishkamya Bhakti

This Bhakti will not expect any fruit from the deity but the bhakti of Bhakta comes from the true or pure heart, then the God provide all divine Aisvaryas to the Bhakta.



Apara Bhakti Para Bhakti

Apara Bhakti

Apara Bhakti is the beginning stage of the para bhakti. In Apara bhakti the bhakta will do decorations, Pujas, Naivedya, Homas and Ceremonies to the God. The Apara bhakta will not accept the other devatas sincerely but he will believe which God he is worshipping.

Para Bhakti

Para bhakti leads to Jnana, it is highest form of the Bhakti, the para bhakta can feel the God every where and anytime. He will do Naivedya mentally to the God wherever he is seeing or crossing pleasant things. Ex: flowers, Sweats etc.

Raja Yoga

The eight-fold path is called Astanga Yoga it is described in the Patanjali Yoga Sutra by the Rishi Patanjali.

"Yama niyamasana Pranayama Pratyahara

Dharana dhyana samadhaya stavangani ‖ *[P.Y.S. – II – 29]*

Eight limbs of Raja Yoga

1. Yama
2. Niyama

3. Asana
4. Pranayama
5. Pratyahara
6. Dharana
7. Dhyana
8. Samadhi

Yama *(Moral conduct for individuals)*

"Ahimsa satyasteya brahmacarya parigraha yamah‖ *[P.Y.S. – II – 30]*

1. Ahimsa
2. Satya
3. Asteya
4. Brahmacarya
5. Aparigraha

Ahimsa *(Non-voilence)*

One should not do the himsa to others and himself also then it is called as Ahimsa.

Satya *(Truthfullness)*

"Satya pratisthayam kriya phalasrayatvam" *[P.Y.S. – II – 36]*

One has to follow the truth in all the situation but if should not harm to others so Ahimsa follows satya.

Asteya *(Non – stealing)*

"Asteya pratistayam sowa rathopasthanam" *[P.Y.S. – II – 37]*

Stealing means not only thefting others objects getting or accepting objects from the friends without the owners knowledge also equal to stealing then thinking to steal also equal to asteya, so one has to follow and maintain the Asteya very strictly and carefully.

Brahmacarya *(Celibacy)*

"Brahmacarya pratisthayam virya labhah" ‖ *[P.Y.S. – II – 38]*

Brhamacarya means not only restraining the genital organ externally in the physical level. The sex is related to the sense and motor organs so one has to control the Jnanendriya (nose, tongue, eyes, skin, ears) and Karmendriyas (upasta, payu, pani, pada, vak) towards the sex, that should be in the mentally, orally and by action also.

Aparigraha

"Aparigraha stairye janma kathanta sambodhah"‖ *[P.Y.S. – II – 39]*

Aparigraha intensifies or emphasises the non receiving habit from others so it leads to simple living spontaneously the practitioner of Aparigraha prone to avoid luxury life because of this habit he can sustain the harms behind the luxury life then indirectly the citta vrttis also comes down or they are not getting stimulation to multiply.

Niyama *(Moral conduct of society)*

"sauca santosa tapas svadyayesvara pranidhanani niyamah"‖ *[P.Y.S. – II – 32]*

Souca *(cleanliness)*

Souca one has to follow or maintain by the mentally and physically. Mentally means avoiding or demolishing the six enemies situated in the mind Kama, Krodha, Lobha, Moha, Madha, Matsarya. Physically means through both one can purify the external body then the internal organs one can purify through the Satkarmas mentioned in the Hathayoga.

"Saucat svanga jugupsa parair asanisargah" ‖ *[P.Y.S.- II-40]*

The yogi is following sauca in physically means he will not get interest on his body because the Human body always gets impurities, disease, old age, death, so the yogi will not get interest to others body also means the sexual intercourse also he will avoid strictly so this mentality will occurs from the practice of sauca.

Samtosa *(Contentment)*

Samtosa means one has to satisfy what he is having at present, if he wants to become materialistic means the present life will give bitter experiences so likes and dislikes (or) duality will arise in the mind, ultimately he will loss the santosa.

"Santosad anuttama suka labhah" *[P.Y.S.-II-42]*

Tapas *(Austeriies)*

"kayendriya Siddhir asuddhi ksayat tapasah"‖ *[P.Y.S. – II – 43]*

Tapas means restraining the mind and body from its object and restraining from the dualities. The object of tapas purifies, and gives discipline to the mind and body. It brings the mind under perfect control of will from the lower nature mentality or qualities.

Svadhyaya *(Knowledge)*

Reading ritual texts, doing pranava dhyana then knowing ethics and philosophies and observing citta vrittis from the citta and controlling the cita vrttis through acquired knowledge this is called as Svadhyaya, by practice of Svadhyaya one can get the dharsana of the ista devata.

"Svadhyayad ista devata Samprayogah"| *[P.Y.S. – II – 44]*

Isvara Pranidhana (Surrendering to the God)

All the actions or Karmas we are doing through Purusa so the body is not responsible for the fruits also, so the Purusa is reflexing from the Isvara. All the fruits

and benefits of the Karma also we should submit to the Isvara only, that is called Isvara Pranidhana. The practice of Isvara Pranidhana leads to Samadhi.

"Samadhi Siddhir isvara Pranidhanat" || *[P.Y.S. – II – 45]*

Asana

"Sthira Sukham Asanam"|| *[P.Y.S. – II – 46]*

Asana means steady and comfort posture. The yogi while doing asanas his mind and body should get steady and comfort position without any disturbances. Asana eradicate the dualities and citta vrttis from the mind.

Pranayama

Pranayama is the technique by which one gets control over the inhalation, exhalation and little pause (retention) in between the normal breath.

Pratyahara *(Restraining the five senses from its objects)*

"Sva-visayasamprayoe citta-svarupanukara indriyanam pratyaharah"|| *[P.Y.S. – II – 54]*

Restraining the mind and five senses or indriyas (Five jnanedriya, five Karmendriyas) from its object and realizing the law of nature is called as Pratyahara. By practicing of Pratyahara the Yogi can control over the organs of sense and motor so he can rule the indriyas by which he can get supreme position.

Dharana

"Desa bandha cittasya dharana"‖ *[P.Y.S. – II – 1]*

Continuing the pratyahara state without any disturbances and conflicting of citta on a spot within a limited sphere is Dharana.

Dhyana

"Tatra pratyayaika tanata dyanam" *[P.Y.S. – III – 2]*

Extending the dharana and maintaining one vrtti towards the one pointedness without any other mixture of citta vrttis is called dhyana.

Samadhi

"Tad evartha matra nirbasam sva rupa sunyam iva samadhih"‖ *[P.Y.S. – III –3]*

Extending the dhyana without any vrttis that means cessation of the single vrtti also from the citta, then citta gets Sunya stage that itself called as Samadhi.

Hatha Yoga

The word Hatha is combination of "Ha" and "tha" respectively the Sun and the Moon. It represents the Surya Nadi and Candra Nadi in our body.

Mainly two classical texts explaining about the Hatha Yoga and its practices.

1. Hatha Yoga pradipika of Swatmarama
2. Gheranda Samhita of Gheranda.

According to Hatha Yoga Pradipika the Hatha Yoga has six limbs,

1. Asana
2. Shatkarma
3. Pranayama
4. Mudra
5. Bandha
6. Samadhi

According to Gheranda Samhita Hatha Yoga has seven limbs,

1. Kriyas
2. Asanas
3. Mudras
4. Pratyahara
5. Pranayama
6. Dhyana
7. Samadhi

Asana

Hathasya Prathama ngatvadasanam Purvamucyate |

Kuryattadasananm sthairyam arogyam cangalaghavam || *[H..P. – I – 17]*

Asana is the first component of Hatha Yoga, it gives mental as well as physical steadiness and maintains health of the body then it brings lightness to the body and mind.

Shatkarma

Hatha Yoga suggests us if any impurities accumulated in the body then we should practice Shatkarma that also before starting or commencing the pranayama because Shatkarma performance leads to practice Pranayama easily then it brings equilibrium in between tridosas (Vata, Pitta Kapha) of the body.

Dhautir bastistatha netistratakam naulikam tatha |

Kapala bhatiscaitani Satkarmani Pracaksate || *[H.P. – II – 22]*

Dhauti, Basti, Neti, Trataka, Nauli, Kapalabhati these are said to be six purificatory process.

Pranayama

Hatha Yoga prescribes the pranayama techniques to regulate the mind through breath.

Cale vate calam cittam niscale niscalambhavet |

Yogi Sthanutvamaphoti to to vayum nirodhayet || *[H.P. – II – 2]*

So long as breathing goes on the mind remains unsteady when it stops the mind becomes still and yogi attains complete motionless. Hence one should restrain one's breath. The regulation of breath pranayama is classified as 8 that is called as Asta kumbhakas.

"Surya bhedanamujjayi sitkari sitali tatha |

Bhastrika bhramari murcha plavin ityasta kumbhakah || *[H.P. – II – 44]*

Mudra and Bandhas

The Sanskrit word mudra is translated as gesture or attitude. Mudra is also defined as a seal of energy. The mudras are important to arise the kundalini in the Susumna Nadi.

Bandha

The Sanskrit word bandha means 'hold', tighten or lock, the bandha locks the prana in the particular area and redirect the flow of prana into sushumna nadi for the purpose of spiritual kundalini awakening.

Mahamudra mahabandho mahavedasca khecari |

Uddiyanam mulabandostato jalandharabhi dhah

Karani viparitakhya vajroi sahkicalanam || *[H.P. – III – 6]*

Mahamudra, Mahabandha, Mahavedha, Khecari, Uddiyana, Mulabandha, Jalandharabandha, Viparitakarani, Vajroli and Sakicalana. These are called as mudras.

Samadhi

The word Samadhi is made up of two roots "Sama" + "dhi" = Samadhi "Sama" means equal, "dhi" means reflection or to perceive. When the mind becomes motionless as a result of deep concentration that is called Samadhi.

1.7. STATEMENT OF THE PROBLEM

The purpose of study was to find out the effects of yogic practices on leucorrhoea among the school girls.

1.8. HYPOTHESIS

It was hypothesied that there would be no significant difference in leucorrhoea level due to selected yogic practices among the school girls.

1.9. SIGNIFICANCE OF THE STUDY

1. The research may be helpful to suggest ways and means for improving women's health by introducing yoga in regular curricullum.
2. This study would be helpful to school girls.
3. The study effective in particular diseased womens and girls.

1.10. LIMITATIONS

This research study limited in the following aspects and these limitations should be taken into consideration while interpreting the results.

2. The subject's day to day activities was not controlled.
3. The subjects's medical treatment was not controlled.
4. The uncontrollable changes in climatic conditions such as atmospheric temperature, humidity and other factors during the period of testing were considered as limitations.
5. The diet of the subjects was not controlled.

1.11. DELIMITATIONS

The study was delimited to the following aspects.

1. All subjects were selected on a random basis.
2. Only selected yogic practices were given to the subjects.
3. The study was conducted for a period of three weeks only.
4. The subjects were divided into two groups. One is experimental group and another is control group. Each group consists of 15 subjects. Experimental group undergone selected yogic practices.
5. Age of both these groups was between 15 and 18 years.
6. Both the groups were taken and selected diseased subjects only.

1.12. DEFINITION OF THE TERMS

YOGA

B.K.S. Iyengar says, 'Yoga is a timeless pragmatic science over thousand ofyears, dealing with physical, moral, spritual well being of human society as a whole.

'Yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the present. It is essential need of today and the culture of tomorrow'.

-Swami Satyananda Saraswati

LEUCORRHOEA

Leucorrhoea, commonly known as whites, refers to a whitish discharge from the female genitals.

ESR (ERTHROCYTE SEDIMENT RATE)

When whole blood is allowed to settle, sedimentation of the erythrocytes will occur. The rate at which the red cells is known as thw erythrocyte sedimentation rate.

HB (HAEMOGLOBIN)

Haemoglobin is a conjugated protein present in red blood cells. It carries oxygen from the lungs to the tissue cells, and carbon dioxide – ther gaseous waste – from the cell to the lungs. Haemoglobin consists of two components – haem (iron + Protoporphyrin) and globin (amino acid chains).

EOS (EOSINOPHIL)

Differential count gives the relative number of eosinophil (EOS) in the Leukocyte population. It is possible to get the absolute number of EOS in circulation.

CHAPTER - II

REVIEW OF RELATED LITERATURE

The purpose of this study is to find out the “Effects of the yogic practices on Leucorrhoea among the school girls”. In order to acheive this aim and to build up a background for the study, related and other relevant researchers done previously were briefly reviewed in this chapter.

Portella, et.al (2006) conducted a study entitled “ The association between seasonal and premenstrual symptoms is continuous and is not fully accounted for by depressive symptoms” They found Seasonal affective disorder (SAD) frequently co-occurs with premenstrual dysphoric disorder. Explanations of this comorbidity highlighting the cyclical nature of female sex hormones imply that seasonal and premenstrual symptoms should correlate positively even in nonclinical samples. In a sample of 91 female college students, we found a sizable positive correlation ($r = .45$; $p < 0.001$) between seasonal and premenstrual symptoms. This relation held up even in a subsample selected on the basis of not qualifying for SAD or subsyndromal SAD on a screening measure. Although the correlation was reduced when depressive symptom severity was statistically controlled, it remained positive and significant.

Chen CH, et.al (2006) conducted a study entitled “The self-care strategies of girls with primary dysmenorrhea: a focus group study in Taiwan”.Dysmenorrhea is the most common gynaecological complaint and the leading cause of recurrent short-term school absenteeism among adolescent girls. To explore adolescent girls' self-care strategies for dysmenorrhea, we conducted four focus groups in Kaohsiung, Taiwan,

with 23 female adolescents with primary dysmenorrhea. Thematic content analysis was used to explore and organize the data. The self-care strategies for dysmenorrhea reported by participants included reducing physical activity, modifying diet using herbal remedies or medication, applying complementary therapies, paying attention to symptom clusters of discomforts, and expressing emotions. This is the first study to describe the self-care strategies adopted by adolescent girls with dysmenorrhea in Asia. Data were analyzed in cultural contexts. Knowledge of beneficial food-related or herbal health practices can enable professionals to counsel this population more effectively.

O'Connell K, et.al (2006) conducted a study entitled "Self-treatment patterns among adolescent girls with dysmenorrhea".INTERVENTION: We collected baseline data via interview from adolescent girls at enrollment in a clinical trial of oral contraceptives versus placebo for primary dysmenorrhea. The interview data, collected prior to any intervention, included information on demographics, dysmenorrhea duration and severity, and self-treatment. We used the validated pain subscale of the Moos Menstrual Distress Questionnaire and a 0-10 pain rating scale to estimate pain severity. MAIN OUTCOME MEASURE: Investigator-administered questionnaire. RESULTS: Adolescents' mean age was 16.8 years (SD = 2). Similar proportions described themselves as white (26%), black (30%) or Hispanic (28%). Dysmenorrhea was moderate in 42%, severe in 58%, associated with nausea in 55%, and vomiting in 24%. Of those attending school (n = 66), 46% reported missing one or more days monthly due to dysmenorrhea. Nearly all discussed their pain with someone; however, a minority sought formal medical care. All used nonpharmacological remedies such as sleeping and heat application. Nearly all used at

least one medication, 31% reported using two, and 15% used three medications (not concurrently). Many participants reported using medication at sub-therapeutic doses for pain. CONCLUSIONS: Adolescents with moderate and severe dysmenorrhea reported high morbidity. Girls used numerous non-pharmacologic remedies as well as medications for pain but infrequently accessed formal medical care. Medication dosing was often sub-therapeutic.

Rigon F, et.al (2006) conducted a study entitled “Menstrual disorders in adolescence”. Altered frequencies of the menstrual cycle accompanied by pain are manifestations of functional anomalies of the female reproductive system. These symptoms require prompt and accurate diagnosis and therapy to prevent a chronic condition that can seriously disturb the adolescent's psychic well being. The most common anomalies of the menstrual cycle and the causes of altered cycle frequency are outlined, as are useful criteria for diagnosing premenstrual syndrome dysmenorrhea and for distinguishing the causes and alterations in frequency and amount of menstrual discharge from other disturbances, including amenorrhea and abnormal uterine bleeding. The treatment of dysmenorrhea and quantitative alterations of the menstrual cycle is the focus of this article.

Edoien LC, et.al (2006) conducted a study entitled “Mind over matter: psychological factors and the menstrual cycle”. PURPOSE OF REVIEW: Increasingly, gynaecologists are becoming aware of the impact of psychosocial factors on women's health generally, and on the menstrual cycle in particular. This review highlights developments in this field in the last triennium. RECENT FINDINGS: Stress impairs the ovarian cycle through activation of the hypothalamus

pituitary adrenal axis. The effect of psychological stress on the menstrual cycle is mediated by metabolic factors. Stress-induced impairment of ovarian function may not necessarily manifest as menstrual irregularity, and the effects of stress may persist beyond the cycle in which the stress episode occurred. Response to stress may be determined not so much by the nature of the stress as by the intrinsic neuronal attributes of the individual. SUMMARY: Interventions to address underlying stress should be part of the management regime for women with menstrual cycle abnormalities.

Rizk DE, et.al (2006) conducted a study entitled “Prevalence and impact of premenstrual syndrome in adolescent schoolgirls in the United Arab Emirates”. BACKGROUND: Our objective was to determine the prevalence, sociodemographics, and impact of premenstrual syndrome in adolescent schoolgirls in the United Arab Emirates, as there are no national data on this subject. METHODS: Adolescent girls aged 12-18 years who were at least 1 year postmenarchal were selected from five private and five public schools (n=70 x 10 = 700) in Al-Ain city using a multistage stratified cluster-sampling technique. Subjects were interviewed about cyclic and recurrent behavioral and somatic premenstrual symptoms during the last 3 months based on the American College of Obstetricians and Gynecologists' criteria and their impact on quality of life using a structured and validated questionnaire. RESULTS: The prevalence of premenstrual syndrome was 16.4% (n=115). On logistic regression analysis, premenstrual syndrome was significantly associated with Emirati nationality (p=0.001), presence of the condition in sister(s) (p=0.002), and dysmenorrhea (p<0.001). Only 52 affected subjects (45.2%) were currently taking treatment for premenstrual syndrome and the majority (60%) used

pharmacological therapy. Premenstrual syndrome had a moderate but significant negative impact ($p<0.001$) on the quality of life of affected girls, particularly school performance, social interactions, lifestyle, and emotional well-being. Difficulty in performing school functions and decrease in stigma were the two most adversely affected parameters. CONCLUSION: Premenstrual syndrome is a prevalent, yet undertreated, disorder in adolescent schoolgirls in the United Arab Emirates, which adversely affects their emotional well-being and educational performance, representing a significant public health problem. Premenstrual syndrome is significantly associated with ethnicity, family history, and dysmenorrhea in this group.

Futterman LA, et.al (2006) conducted a study entitled “Diagnosis of premenstrual disorders”. Premenstrual disorders are characterized by numerous moods, somatic and behavioral symptoms that occur during the late luteal phase of a woman's menstrual cycle and abate soon after the onset of menses. The American College of Obstetricians and Gynecologists published diagnostic criteria for premenstrual syndrome (PMS) in 2000; the American Psychiatric Association had previously established very specific diagnostic criteria for premenstrual dysphoric disorder (PMDD). Both diagnoses require 2 months of prospective symptom ratings, which can be accomplished using forms designed by individual clinicians or employing 1 of a number of validated instruments. The patient will need to provide a complete family and personal history of mental disorders and medical diseases. A thorough physical examination and certain basic laboratory tests should either identify or rule out many potential causes of the symptoms. The diseases, disorders or situations considered in the differential diagnosis of PMS and PMDD will depend on

the woman's presenting symptoms. Many women with a bothersome or debilitating premenstrual disorder go undiagnosed, either because they do not report their symptoms to a clinician or because the clinician has difficulty diagnosing the disorder.

Kennedy S, et.al (2006) conducted a study entitled "Randomized controlled trial assessing a traditional Chinese medicine remedy in the treatment of primary dysmenorrhea". A proof-of-concept study to assess the safety and efficacy of a traditional Chinese medicine formula as treatment for primary dysmenorrhea showed no statistically significant benefit over placebo. However, some efficacy parameters suggested possible superiority of the active treatment and so a larger study needs to be performed to determine whether this remedy has a role in the treatment of dysmenorrhea.

Liu XY, et.al (2006) conducted a study entitled "Observation on therapeutic effect of acupoint catgut embedding therapy on premenstrual syndrome" OBJECTIVE: To compare clinical therapeutic effects of acupoint catgut embedding therapy and medicine on premenstrual syndrome, so as to search for the best method for this disease. METHODS: Eighty-eight cases were randomly divided into a catgut embedding group and a medication group. The catgut embedding group were treated with main points, Neiguan (PC 6), Sanyinjiso (SP 6), Danzhong (CV 17), Guanyuan (CV 4), Taichong (LR 3), and aduvant points, Back-shu, and the medicine group with oral administration of fluoxetine. After treatment of 3 months, their therapeutic effects were compared. RESULTS: The therapeutic effect of the catgut embedding group was better than that of the medication group with a very statistically significant difference

(P < 0.005). CONCLUSION: Acupoint catgut embedding is a better therapy for premenstrual syndrome.

Kim JS, et.al (2006) Conducted a study entitled “The effects of abdominal meridian massage on menstrual cramps and dysmenorrhea in full-time employed women” PURPOSE: This study was designed to examine the effects of abdominal meridian(Kyongrak) massage on menstrual cramps and dysmenorrhea. METHOD: Eighty-five women (of 110 screened) enrolled in this study and were employed full-time with more than 6.0 points (in 0-10.0 VAS scale) in menstrual cramps or more than 20 points on the dysmenorrhea scale (range 13-52). The forty-two participants in the experimental group received abdominal meridian massage for 5 minutes per day during 6 days from the fifth day before menstruation to the first day of menstruation and the forty-three participants in the control group didn't receive any treatment. RESULT: Menstrual cramps and dysmenorrhea of the experimental group were significantly lower after abdominal meridian massage than those of the control group (p<.001). CONCLUSION: Abdominal meridian (Kyongrak) massage was very effective for relief of menstrual cramps and dysmenorrhea.

Sun JL, et.al (2006) conducted a study entitled “Aromatherapy for dysmenorrhea” Dysmenorrhea is one of a number of discomforts that women often suffer. Many kinds of complementary therapies have been discussed in the literature on the subject, and aromatherapy is one of these. Aromatherapy uses the action of essential oils refined from plants to relieve discomfort. It is effective at relieving the symptom distress associated with many conditions, but the literature contains little information about essential oils and dysmenorrhea relief.

Kim YS, et.al (2006) conducted a study entitled “The effect of self-foot reflexology on the relief of premenstrual syndrome and dysmenorrhea in high school girls” PURPOSE: This study was aimed to identify the effect of self-foot reflexology on the relief of premenstrual syndrome and dysmenorrhea in high school girls. METHOD: Study subjects were 236 women residing in the community, teachers and nurses who were older than 45 were recruited. Data was collected with self administered questionnaires from July 1st to August 31st, 2003 and analysed using SPSS/WIN 10.0 with Xtest, t-test, and stepwise multiple logistic regression at a significant level of =.05. RESULT: The breast cancer-screening rate was 57.2%, and repeat screening rate was 15.3%. With the multiple logistic regression analysis, factors associated with mammography screening were age and perceived barriers of action, and factors related to the repeat mammography screening were education level and other cancer screening experience. CONCLUSION: Based on the results, we recommend the development of an intervention program to decrease the perceived barrier of action, to regard mammography as an essential test in regular check-up, and to give active advertisement and education to the public to improve the rates of breast cancer screening and repeat screening.

Chen HM, et.al (2002) conducted a study entitled “Effects of acupressure at the Sanyinjiao point on primary dysmenorrhoea” BACKGROUND: Dysmenorrhoea is the most common gynaecological disorder among adolescents. Traditional Chinese acupressure derived from acupuncture is a non-invasive technique. Despite renewed interest in the use of acupressure, relatively few studies have been undertaken to examine its effects on primary dysmenorrhoea. METHODS: An experimental study

was conducted female students attending a technical college in Taiwan. None of the 69 participants had a prior history of gynaecological disease or secondary dysmenorrhoea, and all were rated higher than five for pain were on a visual analogue scale from 0 to 10. The experimental group (n = 35) received acupressure at Sanyinjiao (above the ankle) while the control group (n = 34) rested for 20 min, while the control group underwent rest in the school health centre for 20 min without receiving acupressure. Fifty participants (30 experimental, 20 control) completed the 4-6-week follow-up session. Five instruments were used to collect pretest and post-test data at each session: (1) Visual Analogue Scale for pain; (2) the Short-Form McGill Pain Questionnaire; (3) the Menstrual Distress Questionnaire; (4) the Visual Analogue Scale for anxiety; and, for the experimental group only, (5) the Acupressure Self-Assessment Form. Data were analysed using the chi-square test, two-sample t-test and repeated measures two-way anova. RESULTS: Acupressure at Sanyinjiao during the initial session reduced the pain and anxiety typical of dysmenorrhoea. In the self-treatment follow-up session, acupressure at Sanyinjiao significantly reduced menstrual pain but not anxiety. Thirty-one (87%) of the 35 experimental participants reported that acupressure was helpful, and 33 (94%) were satisfied with acupressure in terms of its providing pain relief and psychological support during dysmenorrhoea. CONCLUSION: The findings suggest that acupressure at Sanyinjiao can be an effective, cost-free intervention for reducing pain and anxiety during dysmenorrhoea, and we recommend its use for self-care of primary dysmenorrhoea.

Schell FJ, et.al (1994) conducted a study entitled " Physiological and psychological effects of Hatha-Yoga exercise in healthy women" Hatha-Yoga has become increasingly popular in western countries as a method for

coping with stress. However, little is known about the physiological and psychological effects of yoga practice. We measured heart rate, blood pressure, the hormone cortisol, prolactin and growth hormone and certain psychological parameters in a yoga practicing group and a control group of young female volunteers reading in a comfortable position during the experimental period. There were no substantial differences between the groups concerning endocrine parameters and blood pressure. The course of heart rate was significantly different, the yoga group had a decrease during the yoga practice. Significant differences between both groups were found in psychological parameters. In the personality inventory the yoga group showed markedly higher scores in life satisfaction and lower scores in excitability, aggressiveness, openness, emotionality sand somatic complaints. Significant differences could also be observed concerning coping with stress and the mood at the end of the experiment. The yoga group had significant higher scores in high spiritsand xtravertedness.

CHAPTER - III

METHODOLOGY

The purpose of this study was to investigate the effects of yogic practices leucorrhoea among the school girls. In this chapter, the investigator adopted the following precedures such as Subject and Design, Experimental treatment, Selection of variables, Subject Orientation, Reliabilty of data, Method of data and Satistical techniques.

3.1 SUBJECT AND DESIGN

Thirty subjects girls were selected randomly from Kalaingar Karunanidhi Government Higher Secondary School, Kalitheerthalkuppam, Puducherry State. As subjects age was ranging from 15 to 18 years. By using random sampling subjects were divided into two groups namely control group and experimental group each consisting of fifteen school girls.

3.2 EXPERIMENTAL TREATMENT

Some of the selected yogic practices, used in the study are given below.

Asanas

Passcimottanasana

Mandugasana

Ardha ustrasana

Sasangasana

Janusirasana

Sethubhandhasana

Ardhapavanamuktasana

Ardha sirasasana

Bhujangasana

Ardhakadi cakrasana

Padahastasana

Ardha cakrasana

Tadasana-I

Viparitakarni

Viparitakarani QRT (A, U, M, & AUM)

Matyasana (simple)

Savasana

Pranayamas

Kabalabhati

Sectional breathing

Nadisuddhi

Sitali

Sitkari

Bhramari

The training schedule s was presented in th e table- 1

Table – I Yoga training programme

Si. No.	Yoga Practices	Duration(Min.)	Frequency(Min.)	Total(Min.)
1	Prayer	2		2
2	Pascimottanasana	1		1
3	Mandugasana	1		1
4	Ardha ustrasana	1		1
5	Sasangasana	1		1
6	Janusirsasana	2	2	2
7	Sethu bhandhasana	1		1
8	Ardha pavanamuktasana	2	2	2
9	Ardha sirasasana	1		1
10	Bhujangasana	1		1
11	Ardhakadi chakrasana	2	2	2
12	Padahastasana	1		1
13	Ardha cakrasana	1		1
14	Tadasana-I	1		1
15	Viparitakarani	1		1
16	Viparitakarani QRT (A,U, M , & AUM)	2		2
17	Matyasana(simple)	1		1
18	Savasana	10		10
19	Kaphalabhati(slow)	1	10 Count	1
20	Sectional breathing	1	5 Rounds	1
21	Nadisuddhi	1	5 Rounds	1
22	Sitali	2	5 Rounds	2
23	Sitkari	2	5 Rounds	2
24	Bramari	2	10 Rounds	2
25	Akara chanting	2	10 Rounds	2
26	Prayer	2		2
			Total	45

- Total work out 45 minutes.
- 7 days a week for the period of three weeks.

3.3 SELECTION OF VARIABLES

The investigator reviewed the available scientific literature and on the basis of discussion with experts, and subject literature pertaining to the impact of yogic practice on leucorrhoea from books, journals, periodicals & magazines and also from research papers the investigator choose the following variables namely Erthrocyte sediment rate, Heamoglobin, Eosnophil.

3.4 ORIENTATION OF SUBJECT

Yogic practices should be selected only after guide within the co-operation of the subjects selected yogic practices were administered and instructions were given.

3.5 RELIABILITY OF DATA

Reliability of data was ensured by a standard blood diagnosis from lab technicians.

3.6 METHODS OF DATA COLLECTION

Data were collected by the technical qualified lab technicians of Lalitha Clinical Laboratory, 144, Bussy St., Puducherry-1 and Lab Testing Producure is on Appendice-1

3.7 STATISTICAL TECHNIQUE

The data collected from the experimental group and control group was statistically analysed by using “t” test. The criteria for statistical sificance were set at 0.05 level of confidence.

CHAPTER – IV

ANALYSIS AND INTERPRETATION OF DATA

In this chapter the statistical analysis of the data collected from the experimental group and control group on selected standard lab test variables and the result of the study. The result findings mainly based on the `t' test. The level of significance was fixed at 0.05 level of confidence.

4.1 ANALYSIS OF DATA

The effect of independent variables on Leucorrhoea was determined through the collected data by using appropriate statistical techniques and the results are presented below. The mean, mean difference values and standard deviations and t-ratio obtained for leucorrhoea on yogic practices of the experimental and control groups have been analysed and presented in below tables.

PERCENTAGE TABLE FOR CONTROL AND EXPERIMENTAL GROUPS

TABLE-2

TABLE FOR PERCENTAGE ON AGE OF RESPONDENTS IN CONTROL AND EXPERIMENTAL GROUPS

Group	**Age of Respondent**	**No. of Respondent**	**Percent**
Control	16	10	66.7
	17	14	26.7
	18	1	6.7
Experimental	15	4	26.7
	16	7	46.7
	17	2	13.3
	18	2	13.3

The above table explained the percentage of respondents age, in control group the lowest age of respondents was 10 and 66.7 percent. The highest age was only one respondent. In experimental group lowest age were 4 respondents having 26.7 percent. The highest age was only two respondents.

Bar diagram showing the H B of pre and post test 'Means' of control group and experimental group.

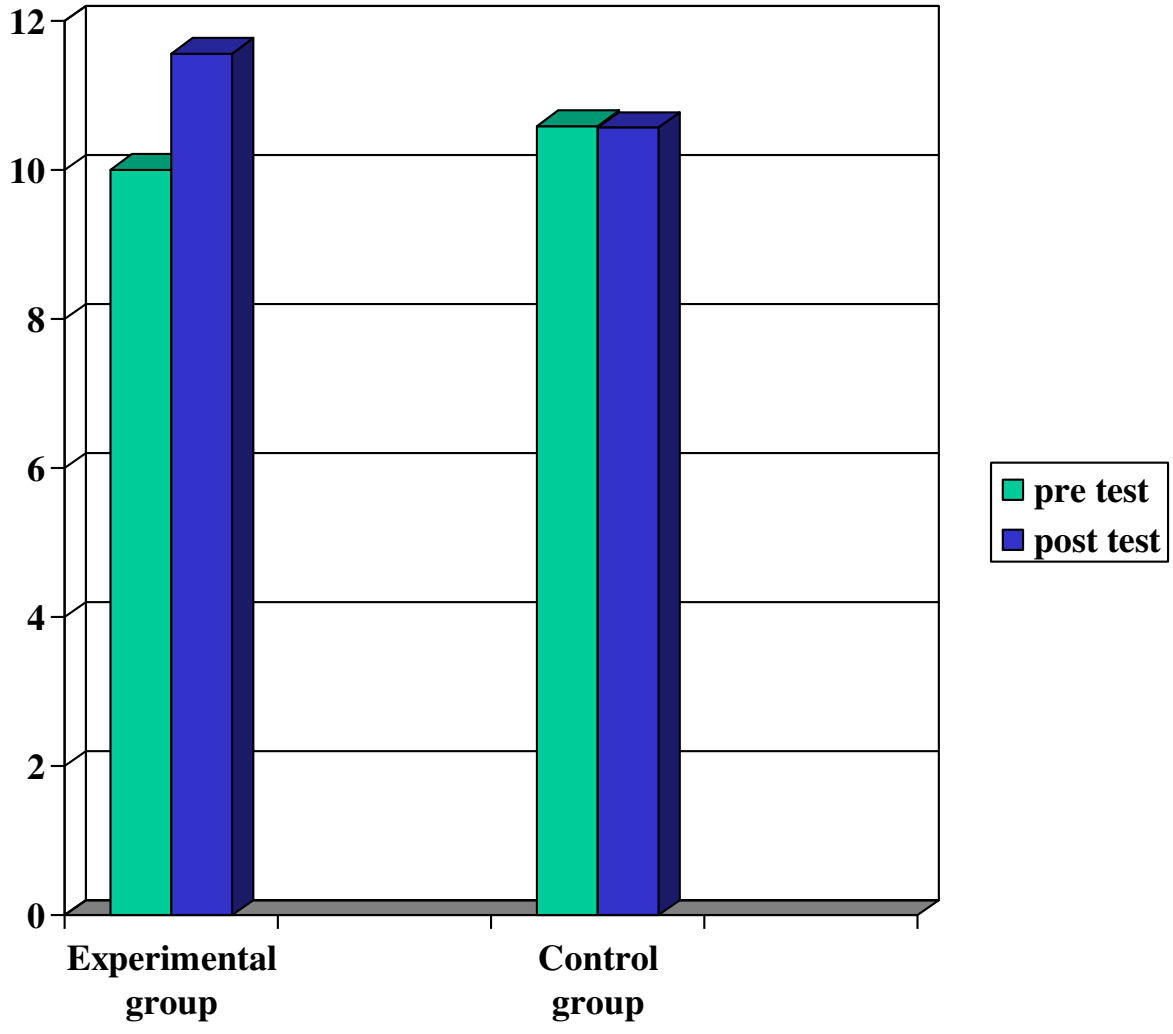


Figure - 1

TABLE-3

TABLE FOR PERCENTAGE ON PRE TEST READINGS OF ESR IN CONTROL AND EXPERIMENTAL GROUPS

Groups	Reading of ESR	No. of Respondent	Percentage
Control	7-20	6	40
	21-35	4	33.3
	36-65	5	26.7
Experimental	7-25	9	60
	28-60	6	40

The above table defined the Percentage of the respondents on pretest readings of ESR in Control and Experimental groups. In control group highest reading was 5 respondents had 26.7 percent, The lowest reading was 6 respondents had 40 percent. In Experimental group shows highest reading 6 respondents had 40 percent, lowest reading 9 respondents were 60 percent.

TABLE-4

TABLE FOR PERCENTAGE ON POST TEST READINGS OF ESR IN CONTROL AND EXPERIMENTAL GROUPS

Groups	Reading of ESR	No. of Respondent	Percentage
Control	7-23	8	53.3
	28-64	7	46.7
Experimental	12-19	6	40
	20-52	9	60

The above table explained the Percentage of the respondents on posttest readings of ESR in Control and Experimental groups. In control group highest reading was 7 respondents had 46.7 percent, The lowest reading was 8 respondents had 53.3 percent. In Experimental group shows highest reading 9 respondents had 60 percent, lowest reading 6 respondents were 40 percent .

TABLE-5

TABLE FOR PERCENTAGE ON PRE TEST READINGS OF HB IN CONTROL AND EXPERIMENTAL GROUPS

Groups	Reading of HB	No. of Respondent	Percentage
Control	Less than 11	3	20
	11and above	12	80
Experimental	7.6-10	8	53.3
	10.1-12.1	7	46.7

The above table defined the Percentage of the respondents on pretest readings of HB in Control and Experimental groups. In control group highest reading was 12 respondents had 80 percent, The lowest reading was 3 respondents had 20 percent. In Experimental group shows highest reading 7 respondents had 46.7 percent, lowest reading 8 respondents were 53.3 percent.

TABLE-6

TABLE FOR PERCENTAGE ON POST TEST READINGS OF HB IN CONTROL AND EXPERIMENTAL GROUPS

Groups	Reading of HB	No. of Respondent	Percentage
Control	9.6-10.5	8	53.7
	10.6-12.5	7	46.7
Experimental	9.5-11	5	53.3
	11.1-12.8	10	46.7

The above table defined the Percentage of the respondents on posttest readings of HB in Control and Experimental groups. In control group highest reading was 7 respondents had 46.7 percent, The lowest reading was 8 respondents had 53.7 percent. In Experimental group shows highest reading 10 respondents had 46.7 percent, lowest reading 5 respondents were 53.3 percent.

TABLE-7

TABLE FOR PERCENTAGE ON PRE TEST READINGS OF EOS IN CONTROL AND EXPERIMENTAL GROUPS

Groups	Reading of EOS	No. of Respondent	Percentage
Control	1-8	10	66.7
	Above 8	5	33.3
Experimental	2-8	8	53.3
	10-19	7	46.7

The above table shows the Percentage of the respondents on pretest readings of EOS in Control and Experimental groups. In control group highest reading was 5 respondents had 33.3 percent, The lowest reading was 10 respondents had 66.7 percent. In Experimental group shows highest reading 7 respondents had 46.7 percent, lowest reading 8 respondents were 53.3 percent.

TABLE-8

TABLE FOR PERCENTAGE ON POST TEST READINGS OF EOS IN CONTROL AND EXPERIMENTAL GROUPS

Groups	Reading of EOS	No. of Respondent	Percentage
Control	1-8	10	66.7
	9-15	5	33.3
Experimental	2-5	6	40
	6-10	9	60

The above table defined the Percentage of the respondents on pretest readings of EOS in Control and Experimental groups. In control group highest reading was 5 respondents had 33.3 percent, The lowest reading was 10 respondents had 66.7 percent. In Experimental group shows highest reading 9 respondents had 60 percent, lowest reading 6 respondents were 40 percent.

TABLE-9

COMPUTATION OF t-RATIO OF ESR FOR CONTROL AND EXPERIMENTAL GROUPS

Groups	Mean		Mean differene	Standard deviation		't' ratio
	Pre	Post		Pre	Post	
Control	28.4000	27.8667	.5333	17.2743	17.2621	.085
Experimental	27.0000	21.9333	5.0667	12.0119	9.3462	1.289

The above table shows the mean, mean difference and standard deviation of pre and posttest of ESR for control group. It reveals that the obtained t value [.085] was less than the table value at 0.05 level. So it was found not to be significant.

The above table derives the mean and standard deviation of pre and posttest of ESR for experimental group. It reveals that the obtained t-value (1.289) was less than the table value at 0.05 level. So it was found not to be significant.

TABLE-10

COMPUTATION OF t-RATIO OF HB FOR CONROL AND EXPERIMENTAL GROUPS

Groups	Mean		Mean differene	Standard deviation		't' ratio
	Pre	Post		Pre	Post	
Control	10.5933	10.5733	2.000	.9200	.9308	.059
Experimental	10.0133	11.5600	-1.5467	1.3778	1.0822	-3.419*

***** Significant at 0.05 level of confidence

The above table defined the mean, mean difference and standard deviation of pre and post of HP for Control group. It reveals that the obtained t value [.059] was less than the table value at 0.05 level. So it was found not to be significant.

The above table shows the mean, mean difference and standard deviation of pre and posttests of HP for experimental group. It reveals that the obtained t-value (-3.419) was greater than the table value at 0.05 level. So it was found to be significant.

TABLE-11

COMPUTATION OF t-RATIO OF EOS FOR CONROL AND EXPERIMENTAL GROUPS

Groups	**Mean**		**Mean differene**	**Standard deviation**		**'t' ratio**
	Pre	**Post**		**Pre**	**Post**	
Control	10.3333	10.5333	-.2000	12.0040	11.8916	-.046
Experimental	8.4000	6.3333	2.0667	5.1242	2.6095	1.392

The above table shows the mean, mean difference and standard deviation of pre and posttests of EOS for Control group. It reveals that the obtained t value [-. 046] was less than the table value at 0.05 level. So it was not found to be significant.

The above table explained the mean and standard deviation of pre and posttest of EOS for experimental group. It reveals that the obtained t-value [1.392] was less than the table value at 0.05 level. So it was found not to be significant.

4.2 DISCUSSION ON FINDINGS

The result of the study have been analysed and discussed here. In this study the control group had not shown significant difference in any of the selected variables namely ESR, HB, EOS. However in the experimental group significant change was observed in HB. At the same variables ESR & EOS shown slightly improvement but not statistically significant. This may due to short duration of practice.

4.3 DISCUSSION ON HYPOTHESIS

The variables ESR and EOS the above hypothesis was accept and in case HB above hypothesis was rejected.

CHAPTER - V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

The purpose of the study was to find out the effects of Yogic practices on Leucorrhoea among the school girls. Thirty girls were selected as subject for this study from Kalaingar Karunanidhi Government Higher Secondary School, Kalitheerthalkuppam, and Puducherry. The age of the subjects ranged from 15 to 18 years the subjects were divided into two groups namely control group and experimental group by random sampling. The experienced lab technicianes were tested on Leucorrhoea level through standard lab test method.

The control group was not given training only the experimental group was trained in yogic practices for forty-five minutes at evening on regular for a period of three weeks. The data collected were subjected to statistical treatment. To find out the effect of yogic practices on Leucorrhoea `t' ratio was used. The level of siginificance was fixed at 0.05.

5.2 CONCLUSIONS

Within the limitations of the study the following conclusions may be arrived.

- There was no decrease in the Leucorrhoea of the control group.
- The Leucorrhoea of the experimental group has reduced significantly, when compared to that of the control group.
- Yogic practices are recommended for reduce level of Leucorrhoea among schoolgirls.

5.3 RECOMMENDATIONS

Based on the findings of the present study, the investigator suggests the following recommendations.

- Similar study may be conducted for different age groups.
- Similar study may be conducted to find out the effect of yogic practices on other Women's problems like, Amenorrhea, Dysmenorrhea.
- Similar study may be conducted to find out the effect of yogic practices on long duration.
- Similar study may be conducted to find out the effects of yogic practice leucorrhoea on womens.

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APPENDIX

Control Group

Si. No.	Name	Age	Pre Test Data			Post Test Data		
			ESR	HB	EOS	ESR	HB	EOS
1	**A**	17	08	9.4	08	07	9.3	07
2	**B**	16	20	10.8	13	20	10.7	13
3	**C**	18	14	9.9	51	13	9.9	51
4	**D**	16	39	10.3	13	40	10	13
5	**E**	17	11	11.2	14	11	11.4	14
6	**F**	16	25	12.6	06	23	12.5	08
7	**G**	16	30	9.9	04	30	10	05
8	**H**	17	07	9.9	02	07	9.8	02
9	**I**	16	39	10.3	07	37	10	07
10	**J**	16	23	9.5	01	23	9.6	01
11	**K**	16	20	11.2	08	20	11.5	08
12	**L**	17	30	10.3	06	28	10.5	08
13	**M**	16	35	11.2	03	35	11	03
14	**N**	16	65	10.3	06	64	10.4	06
15	**O**	16	60	12.1	13	60	12	12

Experimental Group

Si. No.	Name	Age	Pre Test Data			Post Test Data		
			ESR	HB	EOS	ESR	HB	EOS
1	**A**	18	30	9.0	11	30	11.2	06
2	**B**	15	28	12.1	06	24	12.2	05
3	**C**	17	60	9.0	06	52	11.0	04
4	**D**	16	31	11.7	13	20	12.8	10
5	**E**	16	20	10.0	11	18	12.6	09
6	**F**	16	25	10.7	02	20	11.8	05
7	**G**	17	38	10.8	08	25	12.8	06
8	**H**	18	20	7.6	03	15	10.2	08
9	**I**	15	21	9.4	15	20	10.4	06
10	**J**	15	21	8.5	10	16	9.5	09
11	**K**	16	20	11.7	12	19	12.0	08
12	**L**	15	21	10.8	04	18	12.0	02
13	**M**	16	25	8.1	19	20	10.2	10
14	**N**	16	38	10.0	04	20	11.9	05
15	**O**	16	07	10.8	02	12	12.8	02

Lab Testing Procedure – 1

Administration of Test

Variable : (ESR, Hb, Eosinophil)

Test : Standard Lab Test Method

Purpose : To control and Effects of logic practice in Leucorrhoea

1.) ESR

The whole blood is allowed to settle, sedimentation of the erythrocytes will occur. The rate at which the red cells fall is known as the erythrocyte sedimentation rate.

For the Laboratory determination of ESR three methods are used –Westergren method, wintrobe method and Landaw method. Each has its advantage and disadvantage. The westergren sedimentation method gives more accurate results and is widely used. So, I used westergren method.

WESTERGREN METHOD

The Westergren method of ESR determination is more sensitive and gives higher values. In this method blood is diluted 1.25 times with the anticoagulant (citrate) or with saline in case of EDTA anti coagulated blood.

Note: The original Westergren method requires trisodium citrate solution as an anti coagulant (0.106m). The solution must be stored in a refrigerator. Put 0.4ml of the tri sodium citrate solution in blood collection bottle and mix it with 1.6ml of blood drawn by venipuncture (dilution 1:4) use this diluted blood for ESR determination. This diluted blood called EDTA-anti coagulated blood.

Procedure

1) Deliver 0.5 ml of 0.85% sodium chloride into a plain test tube (15ml).
2) Add 2ml of well-mixed EDTA-anticoagulated blood to the test tube and gently mix by swirling. Mix thoroughly for 2 minutes.
3) Check the Westergren tube rack. It must be exactly leveled resting on aplain surface, and away from air draft. Variation in temperature affects the ESR value.
4) Fill the Westergren tube exactly to the o mark, making certain that there is no air bubble in the blood column drawn through the tube.
5) Place the Westergren tube in the stand, making sure that the tube is upright, and fits snugly and evenly into the groove provided for it.
6) Allow the tube to stand for exactly 60 minutes (set the timer to ring).
7) Note the level to which the red cell column has fallen at the end of one hour.
8) Report the result in mm/first hour.

2.) HB

Hb means Hemoglobin.

Method of Hemoglobin Determination

Various methods are in use of which cyanmethaemoglobin method is most widely recommended.

Cynmetheamoglobin Method

Cynmethamoglobin method is a colorimetric procedure for determining Hemoglobin concentration. An aliquot of well-mixed whole blood is taken and reacted with a solution of potassium cyanide and potassium ferricyanide. The chemical reaction yields a product of stable colour-the cyanmet hemoglobin. The intensity of colour is proportional to the hemoglobin concentration and obeys Beer's Law.

Equipment

Photometer with 540mm filter, blood pipette (sabli) of 20-ul capacity, automatic dispenser (5-ml), surgical gauze, test tubes and other glassware.

Determination of Hemoglobin

1) Use the sahli pipette for taking whole blood specimen
2) Draw well mixed blood into the pipette
3) Wipe of the tip
4) Dispense the blood specimen into a tube with 5ml of Drabkin's solution or cyanide solution.
5) Wash out the inside of the pipette repeatedly.
6) Mix and wait for 5 minutes, before the solution is taken for absorbance.
7) Set the 0% Transmittance with the help of the left control knob.
8) Insert the cuvette with bank solution and set the 100% Transmittance with the control knob on the right.
9) Finally, Inert the Standard solution and test solutions (T1, T2) and read their respective absorbance on the scale.

3. Eosinphil

Differential count gives the related number of eosinophil (EOS) in the leukocyte population. It is possible to get the absolute number of EOS in circulation by the following mathematical calculation.

$$\text{EOS/ul} = \frac{\text{EOS(\%) in differential count XTLC /ul}}{100}$$

Procedure

1. Transfer 0.45ml of diluting fluid into an Erlenmeyer flask or test tube (10-ml). Note: This will give 1:10 dilution, which is needed; for higher diluation of 1:20, take 0.38 ml of the diluting fluid.

2. Transfer 20ul (0.02ml) of anticoagulated blood into the flask with the diluting fluid. Take care to wipe the outside of the pipette before transferring the blood specimen to avoid false high values, and also wash the contents of the pipette at least three times. Leave the pipette in the flask, it will be used latu for filling the counting chamber.

3. Mix the diluents and the blood specimen through and wait for 20 minutes. Set aside the pipette while mixing.

4. Again shake well, then fill both side of the counting chamber as described before.

5. Let it stand for 3 minutes in a most chamber.

6. Using the low power objective with reduced light, count the number of EOS in the field under focus (1sq mm). EOS will appear as tiny red-stained cells.

7. Count on both sides of the Haemocytometer and calculate the average count.

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