

Proposing Ayurvedic *Traya Upastambha* as an Important Behavioral Health Care Strategy

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Abstract :

“*Traya Upastamba*” is a concept predominantly described in classical treatises of Ayurveda. The word literally means three pillars or triad of life. It encompasses three important pillars such as *Aahara* (Dietary Habits and Nutrition), *Nidra* (Sleep), and *Bramhacharya* (Celibacy/Continenence/Abstinence). These three important pillars can better way be compared with health behavior of modern day and in fact are the important behavioral determinants of health. In this context a narrative review of various literatures pertaining to food and nutrition, sleep and sexual behavior was carried out. At the same time the original concept of *Trya Upastambha* was adopted from classical treatises of Ayurveda. It was observed that the dietary patterns and nutrition are associated with a number of health related conditions. In one of the studies it was found that snacking, intake of meat, fried foods, sweet foods, and instant foods were associated with higher bone mineral density (BMD) on the contrary regular lunch hours, skipping meals, calorie restriction, and eating moderate amounts were associated with lower BMD. At the same time adequate sleep is a central part of healthy life style. This brings proper healthy body and brain function. Similarly sexual behaviors, attraction, and identity vary by age, marital or cohabiting status, education, and race and Hispanic origin. These behaviors and characteristics are relevant to birth and pregnancy rates, as well as to the incidence of sexually transmitted infections (STIs), including human immunodeficiency virus (HIV). Understanding of *Traya Upastambha* is of paramount importance for the management, control and prevention of a good number health problem.

Key Words: *Ahara*, Ayurveda, Behavioral Health, *Bramhacharya*, *Nidra*, *Traya Upastamba*

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Introduction:

Ayurveda remains one of the most ancient and yet living traditions documented and practiced widely in India. ⁽¹⁾ It is believed to be the oldest medical science of the human civilization. It is more clearly the science of life as it transcends the mere treatment of disease and embraces a wide array of principles and practices which deals with each individual in entirety. Postulations proposed by Ayurveda elites are of perennial relevance and many of those hold good value even today. ^(2, 3) Some of the contemporary concepts of today can be understood by several of the age old principles and practices of Ayurveda. *Traya Upastamba* is one such concept which is predominantly described in classical treatises of Ayurveda. The word literally means three pillars of life. It encompasses three important pillars such as *Aahara* (Dietary Habits), *Nidra* (Sleep), and *Bramhacharya*

(Celibacy or better way “Abstinence”). These three important pillars can better way be compared with health behavior of modern day and in fact are the important behavioral determinants of health. Health behavior refers to any action taken by an individual who has the potential to influence health. Health behavior such as smoking, food consumption and dietary patterns, physical activity, obesity, alcohol use, drug abuse, the use of seat belt, sexual behavior, oral health behavior, and other health related behavior are the potential determinants of health. They are the major contributors of both mortality and morbidity of a number of disease and health issues and their consequences globally. So their understanding is of paramount importance for the management, control and prevention of a good number health problem.

Interpretation of the Concept:

Original Concept Delineated in Ayurveda:

The classical description of *Traya Upastambha* is found

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in one of the major classic of Ayurveda known as Charak Samhita. Charak in his classical treatise describes that which support the body like a pillar is called as *Upastambha* (Sub pillar). Adding to this he reiterates that as the sub pillars near to the main pillar help to strengthen the house likewise these *Upastambhas* (Sub pillars) support the body along with *Tristhuna* (three main pillars) such as *Vata*, *Pitta* and *Kapha* (three humours described in Ayurveda). Here the humours such as *Vata*, *Pitta* and *Kapha* are described as the main pillar and the *Upastambhas* (sub pillars) such as *Ahara*, *Nidra* and *Bramhacharya* are described as supporting pillars of life. Both of these together maintain the health and well being of an individual. ⁽⁴⁾

Acharya Charak again says that *Ahara* (food), *Nidra* (sleep) and *Bramhacharya* (Celibacy/Continence/Abstinence) are considered as the three support of life. These support the life by providing strength, complexion, nourishment and help in maintenance of the body in whole life span. ⁽⁴⁾

Understanding Traya Upastambha as a behavioral health strategy:

***Ahara* (Dietary habits and Nutrition):**

Since the time immemorial human beings have recognized the importance of food. Now at this contemporary age with information explosion the importance of nutrition is so well recognized and supported by scientific evidence that virtually all the public health organizations around the world make dietary recommendations. The link between dietary habit and good nutrition with disease prevention is very well understood. It is believed by many gerontologists that disease and debility are not inevitable consequences of growing older. Rather longer and healthier lives are achievable through a healthful balanced diet, exercise, rest, and relaxation. Eating well is no guarantee of good nutrition, for that the foods must pass through six stages: diet (eating healthy foods), digestion, absorption, circulation, assimilation, and elimination. When all these six phases go proper then good nutrition is ensured. Dietary patterns and nutrition are associated with a number of health related conditions. In one of the studies it was

found that snacking, intake of meat, fried foods, sweet foods, and instant foods were associated with higher bone mineral density (BMD) on the contrary regular lunch hours, skipping meals, calorie restriction, and eating moderate amounts were associated with lower BMD. ⁽⁵⁾ There are strong and direct relationships between under nutrition and the disease caused by infectious organisms, including the diverse pathogens labeled as neglected tropical diseases (NTDs). Under nutrition increases the risk of infection, the severity of disease and the risk that children will die, while the physical damage, loss of appetite, and host responses during chronic infection can contribute substantially to under nutrition. These relationships are often synergistic. ⁽⁶⁾

Broadly nutritional disorders could be clubbed together in to malnutrition. Malnutrition is a pathological state resulting from a relative or absolute deficiency or excess of one or more essential nutrients. It comprises four forms- under nutrition, over nutrition, imbalance and specific deficiency. Under nutrition is a condition that results from consistent insufficient food intake over a long period of time. Starvation is a variant of under nutrition that results from extreme conditions. Over nutrition is a condition that results from excessive food intake over a long period of time. Obesity, Atheroma, Diabetes and other metabolic disorders are due to over nutrition. Imbalance is a pathological state resulting from a disproportion among essential nutrients with or without the absolute deficiency of any nutrient. Similarly specific deficiency is a condition resulting from relative or absolute lack of an individual nutrient. ⁽⁷⁾

***Nidra* (Sleep):**

Sleep is a naturally recurring state characterized by reduced or absent consciousness, relatively suspended sensory activity and inactivity of nearly all voluntary muscles. It is associated with a state of muscle relaxation and limited perception of environmental stimuli. Some of the important functions of sleep include restoration, preservation, memory processing etc. Human sleep needs can vary by age and among individuals, and sleep is considered to be adequate when there is no daytime sleepiness or dysfunction. The following table shows an average daily sleep need of an individual as per age.

Table 1 : Daily Sleep Need According to Age ^(8, 9)

Age	Daily Sleep Need
New Born (0-2 Months)	12-18 hrs ⁽⁹⁾
Infants (3-11 Months)	14- 15 hrs ⁽⁹⁾
Toddlers (1-3 Years)	12-14 hrs ⁽⁹⁾
Preschool aged children (3-5 Years)	11-13 hrs, ⁽⁹⁾ 10-12 hrs ⁽⁸⁾
School aged children (5-10 Years)	10-11 hrs, ⁽⁹⁾ At least 9 hrs ⁽⁸⁾
Adolescents (Teens) (10-19 Years)	8.5 – 9.25 hrs, ⁽⁹⁾ 9 hrs ⁽⁸⁾
Adults	7-9 hrs, ⁽⁹⁾ 7-8 hrs ⁽⁸⁾

Adequate sleep is a central part of healthy life style. This brings healthy body and brain function. ⁽¹¹⁾ Sleep is also vital to the physical growth of a child as it supports the immune system thereby reducing the risk of getting sick. ⁽¹²⁾ Sleep deprivation has a major impact on the health and well being of every individual irrespective of age and sex. Young people who do not get enough sleep may be overly active, misbehave, have problems with paying attention, or suffer declines in school performance. Sleep deprivation is sometimes misdiagnosed as attention deficit hyperactivity disorder. ⁽⁸⁾ Sleep deprived young people may have difficulty getting along with others, may be angry and impulsive, or lack motivation. Shorter sleep durations in adolescents and later parental set bedtimes (after midnight) have been linked with depression and increased suicide ideation. ⁽¹³⁾ There also may be a link between sleep loss and risk taking behavior. ⁽¹⁴⁾ Sleep loss is of particular concern in teens as they are already inexperienced drivers. Research has linked decreased sleep (even 25 minutes less on school nights) to lower grades in adolescents. ⁽¹⁵⁾ Sleep loss may lead to increased weight gain and obesity. ⁽¹⁶⁾ One study of teenagers showed that, for each hour of sleep lost, the odds of becoming obese increased. ⁽¹⁷⁾ Sleep helps maintain the healthy balance of a number of hormones, including the ones that control appetite. ⁽¹⁸⁾ Sleep loss may have life and death consequences for a teen driver. Drowsy driving causes more than 100,000 crashes a year, resulting in 40,000 injuries and 1,550 deaths and these numbers are considered conservative for many reasons including under reporting by police of sleep as a cause of crashes.

More than half of all fall asleep crashes involve young drivers between the ages of 16 and 25. ⁽¹⁹⁾ Following are some of the principles to avoid sleep deprivation and to attain a more and better quality sleep.

- | **Consistent Meal Schedule:** Eating and sleeping may seem irrelevant but both of these are interrelated. The circadian rhythm, the internal biological clock can be regulated properly by taking food at a proper time.
- | **Sleep Schedule:** Establishing a regular time to sleep and to wake up makes the circadian rhythm consistent that helps maintain the sleep time.
- | **Caffeine:** It is highly recommended to avoid caffeine to avoid sleep deprivation.
- | **Exercise:** A minimum of thirty minutes exercise helps better sleep.
- | **Sleep Environment:** Better sleep environment brings good sleep.
- | **Stress and Anxiety:** The *Journal of Adolescent Health* reported that sixty eight percent of students stay awake at night due to stress. So stress and anxiety should be avoided before going to sleep.
- | **Naps:** Naps are helpful for keeping someone active during day time. It should not be more that 30 minutes. Afternoon naps are best time as the naps more closely to bedtime may interfere with night sleep. ⁽²⁰⁾

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Bramhacharya

(Continence/Celibacy/Abstinence):

Bramhacharya has been interpreted differently by different authorities in different context. In all these interpretations one thing sustains and remains intact is purity. *Brahmacharya* means leading a life of pure thoughts, pure actions and pure aspirations. ⁽²¹⁾ The contemporary English equivalent to this term is continence or celibacy or in a baggy sense abstinence. Abstinence mainly refers to a self enforced restraint from indulging in bodily activities that are widely experienced as giving pleasure. Most commonly the term is referred to sexual abstinence and abstinence from food or alcohol. In this particular study *Bramhacharya* has been referred to sexual abstinence only. The importance of sexual abstinence has remained associated with *Bramhacharya* since the *vedic* era as Bhagaban Dattatreya has compared woman to a burning pit of fire and man to a pot of ghee. When the latter comes in contact with the former, it perishes. Therefore, women should be abandoned. The average life of mankind has shrunk to forty years as against the natural hundred years. Every well-wisher of the country must think over this most disgraceful and disastrous state of affairs very carefully and apply proper remedies in time. The future well-being of the country rests entirely on youth. It is the duty of the *Sannyasins*, saints, teachers, professors and parents to reintroduce the life of celibacy in youngsters. Swmi Shivananda says “I pray that the educational authorities and the elders will pay their special attention to this vital subject of *Brahmacharya* for the uplift of the future

generation.” ⁽²²⁾

Now let us understand sexual abstinence as one of the important behavioral determinant to some of the health problems. Sexual behaviors, attraction, and identity vary by age, marital or cohabiting status, education, and race and Hispanic origin. ⁽²³⁾ These behaviors and characteristics are relevant to birth and pregnancy rates, as well as to the incidence of sexually transmitted infections (STIs), including human immunodeficiency virus (HIV), the virus that causes acquired immune deficiency syndrome (AIDS). ^(24,25,26) The Center for Disease Control and Prevention (CDC), Atlanta, USA estimates that about 19 million new cases of STIs occur each year. ⁽²⁵⁾ About one-half of all STIs occur among persons aged 15–24, and the direct medical cost of these diseases for that age group alone was estimated at \$6.5 billion in the year 2000. ⁽²⁷⁾ In 2008, CDC estimated that rates of Chlamydia increased, and the largest numbers of reported cases of Chlamydia and gonorrhea were among teenagers aged 15–19. ⁽²⁸⁾ Clearly all these health consequences are related with sexual behavior and the answer to all these problems is abstinence. But practically speaking abstinence in its pure sense is not possible to observe. So a modification in the same can be adopted based on the biological and social needs. This is so because coitus is fundamental to procreation. Modification could be restricting sexual act to nuptial life only, restricting it to own partner only which on the contrary will help in reducing the above said problems.

Table 2 : Constructs of Traya Upastambha and their relative importance

Name of the Construct	Health Related Consequences concerned with individual construct	Modes of Intervention with Relevant Examples
<i>Ahara</i> (Dietary habits and Nutrition)	It includes a range of nutritional disorders that can be classified in to two different categories, such as: <ul style="list-style-type: none"> Diseases due to under nutrition- Low birth weight, Protein energy malnutrition, Xerophthalmia, Nutritional anemia and Vit-A deficiency disorders. 	<ul style="list-style-type: none"> A nutritious balanced diet is the need of the hour for everybody be it a small child, adolescent, pregnant mother, rich or poor. Ayurveda talks about principles of Homology and Heterology (<i>Samanya-Vishesh Sidhant</i>) which means like deficiency can be replenished by like

		substance e.g. Vit-A deficiency can be corrected by supplementation of either therapeutic or nutritional Vit-A.
<i>Nidra</i> (Sleep)	Following are some of the health related consequences as a result of sleep deprivation: <ul style="list-style-type: none"> Physical disorders include Obesity, Hormonal imbalances etc. Mental and Behavioral disorders include difficulty in getting along with others, may be angry and impulsive, or lack of motivation. Conditions like depression and increased suicide ideation are also associated. ⁽¹³⁾ 	<ul style="list-style-type: none"> An appropriate sleep habit as per the age is highly recommended to get rid of the health consequences resulting from sleep deprivation. The sleep need differs in accordance with age such as, for preschool children it is 10-12 hours where as for adults it ranges from 7-8 hours. ^(8,9) Another variant is the day time Nap or Siestas which has been recently found to be associated with 37% of reduction in coronary mortality. ⁽¹⁰⁾
<i>Bramhacharya</i> (Celibacy/ Continance/ Abstinence)	It may include a range of sexually transmitted diseases (STI) including the deadly monster HIV/AIDS. All these conditions are associated with unhygienic and unprotected sexual indulgence.	<ul style="list-style-type: none"> One of the major campaign that is happening today for the prevention of HIV/AIDS that uses a caption called ABC which stands for Abstinence, Be faith full to your partner and Condom. So these three measures could be used as important modes of HIV/AIDS prevention.

Conclusions:

In this present document an effort has been made to propose *Trya Upastambha* as a behavioral health strategy. This concept has not been explored as a behavioral model in Ayurveda. Three of its constructs have important correlation to behavioral health. These constructs have been studied extensively in modern behavioral and bio-medical science. Extensive research findings are available on each of its constructs be it nutrition, sleep or sexual behavior. It is not possible to incorporate each and every research finding in this particular document. Only a few of such research findings could be included in this study. Again Ayurveda has its own philosophy which cannot always be understood in a modern way. *Brahmacharya* has different interpretation by different authorities but for

this study the term has been limited to sexual abstinence which is itself a limiting factor. As postulated in Ayurveda that *Trayaupastambha* essentially maintains the health and wellbeing of an individual so also the constructs of this proposed strategy such as *Ahara* or nutrition, *Nidra* or sleep and *Bramhachrya* or abstinence and sexual behavior (especially in this article) hold immense importance in health and well being of an individual. It is a fact that these three constructs may not always be interrelated to each other like the epidemiological triad but in terms of a holistic approach and wellbeing of an individual in entirety these are of paramount importance and together can bring wholesomeness in health and vitality. Apart from the patho-physiological determinants of these constructs as the three have strong correlation

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with behavior of an individual so these constructs can together be termed as a Behavioral Health Care Strategy.

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