



WELLNESS CHROMOTHERAPY TO IMPROVE HEALTH BALANCE OF ACTIVE WOMEN

D. Trendafilov*, G. Vasileva, V. Petrov

Doctoral Students, Program “Wellness – Health Promotion”, Faculty of Public Health, Healthcare and Tourism, National Sports Academy “Vassil Levski”, Sofia, Bulgaria

ABSTRACT

Purpose: The purpose of this study was to provide evidence of the effectiveness of therapy Colour Light by collecting baseline indicators based on comparative analysis of outcomes for women Body Lighting Chromotherapy.

Methods: The study was conducted among 61 Bulgarian clients, all women. We used: tests-retest to assess the efficiency of own Colour Wellness Chromotherapy. We measured the intensity of the tool by registering the basic indicators determined on the comparative analysis between the results before and after the applied influence of Colours lighting for women Body.

Results: In our original Wellness Chromotherapy, the data were obtained by a specific retest approach and the analysis showed that the means (Mean \pm SD) of the measured values of the indicators were statistically different in the three-month therapeutic effect of chromotherapy ($p < 0.05$). These indicators are interpreted as effective improvement of health care through our wellness programme, which promotes the maintenance of a wellness lifestyle for active women.

Conclusions: The results of our light therapy study are reliable data to create a wellness standard chart for evaluating information to improve the health care of active women. This specific tool is a reliable basis for validating an innovative colour therapy to improve wellness lifestyle.

Key words: Wellness program, body chakras' colour, light therapy, Chromotherapy lighting, Wellness lifestyle, health balance indexes

INTRODUCTION

The history of colour light therapy dates back to the Black Sea civilization and the Mayan culture (1, 2). By applying the entire colour spectrum to the body, chromotherapy represents a technique for restoring imbalance. The colour spectrum is characterised by certain frequencies that have a specific vibration. The healing effects is due to these individual vibrations that are distributed to different parts of the body (3, 4). They have a

strong relationship to costumer's emotional dynamics. This ancient form of alternate medicine, practised for thousands of years among the Thracians (part of modern-day Bulgaria) (5). This medical concept is based on the idea that each individual contains five elements of the universe that exist in specific proportions unique to each individual (6). In other research cases authors were including the study of the personality type and constitution (7, 8, 9 and 10). When these elements are out of balance, the Thracians method works with the energies inherent in the colours of the spectrum to restore that balance. Among the Thracians, the art of healing with colours was founded in the Orpheus traditions (11). People throughout the ancient world (Thracians, Greeks, and Egyptians) used

*Correspondence to: *Dimitar Trendafilov, Doctoral students, program “Wellness – health promotion”, Faculty of public health, healthcare and tourism, National Sports Academy “Vassil Levski”, Sofia, 21 Acad. Stefan Mladenov Str., e-mail: trendafilov.nsa@abv.bg*

coloured minerals, stones, crystals, ointments, and dyes as healing agents and painted shrines in various hues. Traditional Chinese Medicine involves the colours and harmonises them with the internal organs in the human body and the harmony of the entire systems through elemental subordination (12). This methodical approach to health care was based on the fact that each human individual has their own energy balance and vibration level (13). The first colour wheel was invented by Sir Isaac Newton who divided the white sunlight into red, orange, yellow, green, cyan and blue. Then the famous scientist put the two ends of the colour spectrum together to show the natural evolution of colours (14). Light Therapy has been valued throughout history as a remarkable source of healing. Today, the Wellness lifestyle, the health balance and the re-energizing therapeutic applications are combined with light and colour therapies. Their specific effects are being studied in major Research centres, Wellness centers, Fitness centers and hospitals around the world (15-19). Results suggest that full spectrum, ultraviolet and coloured and laser light can have therapeutic value for a range of conditions from chronic pain. In nova days, the health prevention from diseases and depression to immune disorders are important problems in the research work of authors including in the context of the socially responsible economy (20-24).

Wellness Benefits

Light Therapy has been reported, as part of a healthy lifestyle, to temporarily reduce swelling, relieve pain, decrease inflammation, accelerate open wound healing and greatly reduce overall recovery after medical/surgical procedures. Patients have demonstrated increased range of motion, decreased muscle tension and spasm, and improved circulation (<https://draxe.com/health/red-light-therapy/>).

Rejuvenating LED light therapy can be used for temporary pain management such as joint and back pain, sore or torn muscles, sprains, arthritis, post-surgical scars, burns, wounds and more. When used with infrared technology, light therapy (phototherapy) is one of the most effective and noninvasive ways to improve overall wellness. Light therapy is also used to

temporarily relieve Seasonal Affective Disorder (SAD). SAD affects individuals when the lack of sunlight results in seasonal depression. Phototherapy helps with SAD by resetting the internal biological clock (Circadian rhythms), helping individuals sleep better and regulate their mood. Even companies, such as GE and Philips, have created phototherapeutic products to improve and regulate mood (<https://infraredsauna.com/benefits-clearlight-infrared-sauna-led-color-light-therapy/>).

METHODS

The purpose of this study was to provide evidence for the effectiveness of Body Chromotherapy by collecting indicators to accomplish the comparative analysis of outcomes for women Wellness relax. The methodological approach in the study was conducted among 61 Bulgarian clients, all women. We used: tests-retest to assess the efficiency of own Colour Wellness Chromotherapy. We measured the intensity of the tool by registering the basic indicators determined on the comparative analysis between the results before and after the applied influence of Colours lighting for women Body. We test-retest the efficiency of the applied Chromotherapy with a smart Tanita BMI engine and the studied indicators for the body balance energy and health are: 1. Height; 2. Weight; 3. Visceral fat; 4. Adipose tissue; 5. Subcutaneous adipose tissue (BFR); 6. Protein content; 7. Bone mass; 8. Bioage; 9. Body Mass Range in Kcal (daily calories content); 10. Weight without adipose tissue; 11. Weight muscle mass; 12. Body mass index; 13. Percentage of water.

In this original work we use a scientifically recognised method of healing by Colour lighting with all 7 colours of your chakras. Colour is light; divided into different wavelengths that vibrate at different speeds and frequencies. Objects that absorb and do not reflect all wavelengths are inherently black.

Objects that reflect and bounce back all wavelengths are inherently white. Between black and white lies colour. Colours are wavelengths of energy that appear to us as colour because of the potential and capabilities of the object to either absorb or reflect the energy.

Table 3. Admissibility table of the factor model

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Adequacy.	Measure of Sampling	,306
Bartlett's Test of Sphericity	Approx. Chi-Square df Sig.	235,935 120 ,000

When the values in one data series increase, the values in the other data series also increase. In our original Wellness Chromotherapy, the data were obtained by a specific retest approach and the analysis showed that the factor structure that explains 79.35% dispersion of the variance of the measured values of the indicators were statistically different in the three-month therapeutic effect of chromotherapy ($p > 0.05$). These indicators are

interpreted as effective improvement of health care through our wellness programme, which promotes the maintenance of a wellness lifestyle for active women. The number of factors necessary to explain the variance is confirmed by the visual reading of the change in curvature in the graph of **Figure 1**. This establishes the necessary five factor groups. **Table 3** shows the factor structure that explains 79.35% of the variance.

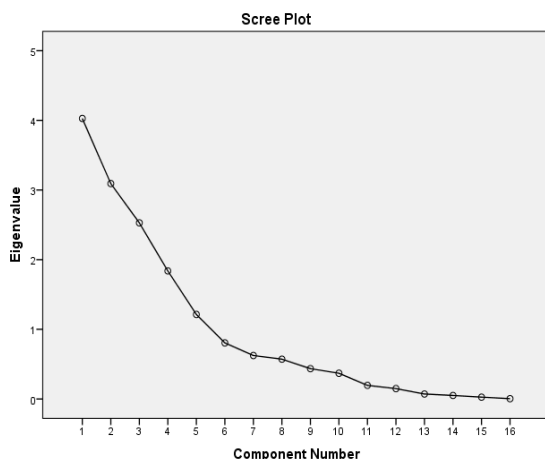


Figure 1. Number of factors in the full study

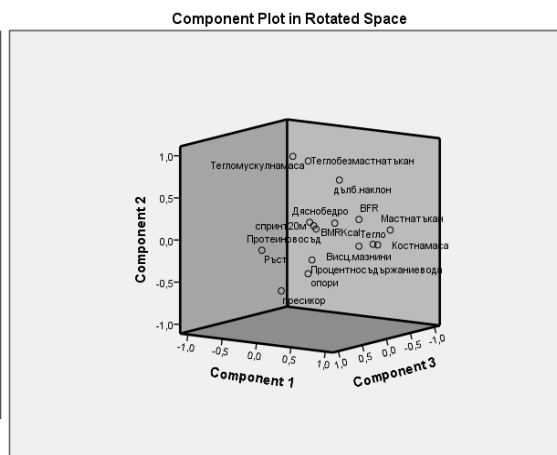


Figure 2. The whole structure Factors

The indicators according to the factor study are divided into five groups. The values of the

correlation coefficients greater than (> 0.5) determine their membership in the respective group.

Table 4. Factor structure of the tested indicators

Indicators	Factor structure				
	1	2	3	4	5
1. Height	-,133	-,065	,806	,096	-,347
2. Weight	,896	-,014	-,033	,112	-,143
3. Visceral fat	,744	-,043	,045	-,106	,242
4. Adipose tissue	,847	,091	-,446	-,045	-,067
5. Subcutaneous adipose tissue (BFR)	,071	,073	-,919	,107	-,043
6. Protein content	-,065	,042	-,222	-,155	,907
7. Bone mass	,933	-,025	-,077	-,033	-,004
9. Body Mass Range in Kcal (daily calories content)	,682	,289	,456	,377	,055
10. Weight without adipose tissue	,111	,933	,192	-,007	,095
11. Weight muscle mass	-,227	,924	,027	-,033	,055
12. Percentage of water	,177	-,233	,222	,733	-,083
13. Dispersion [%]	22,32	41,33	57,97	70,02	79,35

The purpose of the factor analysis is to determine the dominant indicators in each factor group for the considered recreational lighting practice in combination with a specialized aerobic complex. Thus, in this case we define a total of five groups that explain 79.37% of the total variance.

According to the statistical analysis, the first group (**Table 6**) includes the indicators weight (0.895), visceral fat (0.742), adipose tissue (0.849), bone mass (0.931), daily caloric intake BMRK (0.681), which in total cover 22.34% of the variance.

Table 5. Table of factor components

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,027	25,170	25,170	4,03	25,17	25,17	3,73	23,34	23,34
2	3,092	19,326	44,496	3,09	19,33	44,50	2,88	18,01	41,35
3	2,529	15,804	60,300	2,53	15,80	60,30	2,66	16,60	57,95
4	1,838	11,486	71,786	1,84	11,49	71,79	1,93	12,09	70,04
5	1,213	7,583	79,369	1,21	7,58	79,37	1,49	9,33	79,37
6	,805	5,030	84,399						
7	,624	3,900	88,299						
8	,572	3,573	91,872						
9	,435	2,719	94,591						
10	,369	2,306	96,896						
11	,195	1,221	98,117						
12	,149	,931	99,048						
13	,071	,445	99,493						

The second group includes indicators weight excluding adipose tissue (0.930), weight of muscle mass (0.926) and other determinants of 18.01% of the variance.

The third group includes growth (0.808), subcutaneous adipose tissue (-0.917) and other determinants of 17.60% of dispersion.

The fourth group includes water content (0.730) and others determining 12.09% of dispersion. The fifth group includes protein content (0.905), which determines 9.33% of the total dispersion. **Table 5** shows the distribution of total variance after statistical analysis. The analysis considered the main predominant factor groups that contain the analysed indicators, and the others that complete the explanation of the variance up to 100% are of minimal value.

DISCUSSION

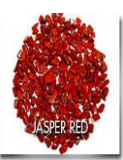



No recovery time is required after LED light treatment because is non-invasive. Costumers will be able to continue with their daily activities, and during treatment. The best efficiency of Chromotherapy requires up to 10 sessions, each




about a week apart and in harmony with the individual skin reaction. The client may start to see insignificant results directly after the first session. The results will be more significant and noticeable after completed all the treatment. When the skin cells renew themselves, they may lose some collagen and start seeing signs of aging again. It is therefore recommended that the client return for maintenance treatment every few months or as recommended by the expert. Treatment with the Chromotherapy is not as dramatic because the light levels are not as high. This type of lighting can and should be used more often for better visibility. More than three quarters of people in Europe struggle with or suffer from a physical illness, and many have health problems related to the ageing process (signs of ageing and chronic disease). Urban planning provides an opportunity to improve sustainability while ensuring high health standards. All indicators of the studied activities of people in Bulgaria show that they have an urgent need for modern methods and tools. The different Light waves and vibrations have different properties and characteristics that

transform the vibrations of the body into a quality that promotes health and harmony. Our personal experience shows that is better to touch a crystal with hands and combine with Relaxing music

during the Chromotherapy. In **Table 6** we present our Original model for the functionality of Colors to body

Table 6. Original model for the functionality of Colors to body and effectiveness of the Chromotherapy lighting

Chakra	Cristal	Connected to	Function	Location	Organs	Light color	Emotional issues
1st Root Chakra	 Red Jasper	Represents our foundation and feeling of being grounded. Life Force, Reproductive Music Key of C	Red light has been shown to enhance libido and increase energy. Additionally, red activates collagen cells and helps stimulate skin to reduce the appearance of lines and wrinkles.	Base of spine in tailbone area.	Gonads, Testes, Ovaries	Red	Survival issues such as financial independence, money, and food. Will to Live
2nd Sacral Chakra	 Orange Carnelian Tigers Eye	Our connection and ability to accept others and new experiences. Elimination, Emotional Self, reativity. Musical Key of D	Orange light therapy is traditionally used to stimulate mental activity and induce cheerful emotions. Orange hues can increase energy levels and improve a person's mood.	Lower abdomen, about 2 inches below the navel and 2 inches in.	Spleen, Bladder, Pancreas, Intestines	Orange	Sense of abundance, well-being, pleasure, sexuality. Will to Feel
3rd Solar Plexus Chakra	 Yellow Citrine	Our ability to be confident and in-control of our lives. Intellect, Cleansing, Elimination. Musical Key of E	Yellow colour light therapy we use to help a costumer feel spiritually grounded while maintaining a positive outlook. It may help individuals feel more optimistic and light-hearted.	Upper abdomen in the stomach area.	Digestive System, Stomach, Liver, Adrenals	Yellow	Self-worth selfconfidence selfesteem. Will to Think
4th Heart Chakra	 Crystal - Aventurine Green	Our ability to love. Unconditional Love. Musical Key of F	We depend on the green colour to feel calm. May consider using green to restore a sense of vividness, joy and inner peace.	Center of chest just above heart.	Circulatory System, Hearing, Thymus	Green	Love, joy, inner peace. Will to Love

<p>5th Throat Chakra</p>	 <p>Blue Crystal - Sodalite</p>	<p>Our ability to communicate. Respiratory, Inspiration. Musical key of G</p>	<p>Used in colour therapy for individuals who suffer from Seasonal Affective Disorder (SAD) or the “winter blues”</p>	<p>Throat</p>	<p>Thyroid Nose, Throat, Lungs</p>	<p>Blue</p>	<p>Communication, self-expression of feelings, the truth. Will to Express</p>
<p>6th Third Eye Chakra</p>	 <p>Purple Crystal – Amethyst Dark Purple</p>	<p>Our ability to focus on and see the big picture. Indigo Intuition, Autonomic. Musical key of A</p>	<p>Purple colour light therapy helps individuals maintain a sense of “mind over matter” when dealing with chronic pain.. This colour stimulates the spleen and white blood cells. It promotes a true sense of tranquillity and ability to think and see clearly.</p>	<p>Forehead between the eyes. (Also called the Brow Chakra)</p>	<p>Pineal, Mid Brain, 3rd Eye, Cooling.</p>	<p>Purple</p>	<p>Intuition, imagination, wisdom, ability to think and make decisions. Will to See</p>
<p>7th Crown Chakra</p>	 <p>White Purple Crystal – Clear Quartz, Light Amethyst</p>	<p>The highest Chakra represents our ability to be fully connected spiritually. Violet – Spiritual, Integration. Musical key of B & C</p>	<p>This is the most common colour to be used in LED colour therapy. It is used to receive the benefits from all the colours used for colour therapy. Research has shown that white light can even increase vitamin D levels.</p>	<p>The very top of the head</p>	<p>Immune System, Pituitary, Left/Right Brain, Spiritual, Power of Transcendence</p>	<p>White</p>	<p>Inner and outer beauty, our connection to spirituality, pure bliss. Will to Be</p>

CONCLUSION

The following conclusions emerge from the analysis:

1. More than three-quarters of people in Europe are struggling with or suffering from a physical illness, many of them suffering from health problems related to their current condition and need Wellness therapies;
2. The urban infrastructure makes it possible to ensure sustainability for the Chromotherapy use while meeting high standards for healthy living;
3. The recognition of all indicators of the studied Chromotherapy with people in Bulgaria, who

- have a crucial need for considerate practices and prosperity health prevention;
4. Chromotherapy Lighting can be applied at home and enhance daily meditation or deep relax and help balance the body's energy.

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