

Color therapy and psychological well-being: A social science perspective on integrative health promotion

Gyuree Kim¹ , Mihee Choi^{2*} 

¹KSCT Korea Society of Color Therapy

²Department of Rehabilitation, Masan University

*Corresponding author: Mihee Choi, choi@masan.ac.kr

CITATION

Gyuree Kim, Mihee Choi. Color therapy and psychological well-being: A social science perspective on integrative health promotion. International Journal of Social Science and Humanities Research-MIYR, 2026, 6(2), 27~35.

<https://doi.org/10.53468/mifyr.2026.6.2.27>

ARTICLE INFO

Received: 01 June 2026

Revised: 08 June 2026

Accepted: 22 June 2026

Available online: 30 June 2026

COPYRIGHT



Copyright © 2026 by author(s). International Journal of Social Science and Humanities Research-MIYR is published by Misheel institute for young researcher's NGO. This work is licensed under the Creative Commons Attribution (CC BY 4.0) license.

<https://creativecommons.org/licenses/by/4.0/>

Abstract- The purpose of this study is to examine the psychosocial significance of color therapy and to provide a theoretical foundation for its application in integrative health and well-being promotion. To achieve this, the study reviews the historical development of color therapy and explores the non-visual pathway and the mechanisms of intrinsically photosensitive retinal ganglion cells (ipRGCs). The findings suggest that specific color wavelengths may influence the hypothalamus and autonomic nervous system through melanopsin activation, potentially contributing to emotional regulation, stress reduction, and psychological well-being. Furthermore, color therapy interventions that reflect the andragogical characteristics of adult learners may promote resilience, self-awareness, and emotional intelligence. As an integrated approach combining external image enhancement with internal emotional healing, color therapy has potential applications in wellness, leadership development, and preventive health promotion. This study provides foundational evidence for understanding color therapy as a psychosocial and integrative health intervention beyond its role as a complementary therapy.

Keywords: Color Therapy, Integrative Health, Psychological Well-Being, Emotional Intelligence, Workplace Wellness, Resilience

1. INTRODUCTION

1.1. Research Background and Significance

As mental health issues such as stress, depression, and anxiety rise in modern society, there is an increasing emphasis on holistic healthcare that encompasses emotional stability and quality of life, moving beyond traditional disease-centered treatments. Consequently, there is a growing interest in non-invasive therapeutic approaches and Complementary and Alternative Medicine (CAM) that can supplement the limitations of pharmacological and invasive treatments.

Color therapy is a sensory-based treatment method that utilizes color and light to influence human emotional and physical responses, with its effectiveness recently being reported across various fields. Previous studies have indicated that color therapy has positive effects on reducing stress, alleviating depression and anxiety, and improving self-esteem. Some research also suggests a correlation between color therapy and autonomic nervous system responses as well as physiological changes.

Furthermore, color-based programs are linked to the development of emotional competencies such as emotion recognition, self-regulation, and empathy, which serve as crucial factors in an individual's psychological stability and social adaptation. In this regard, color therapy can be viewed as a potential intervention method that goes beyond simple emotional stimulation to contribute to emotional regulation and the enhancement of psychological functions.

However, existing research has primarily focused on verifying individual effects, leaving a gap in systematic analysis regarding the integrated mechanisms through

which color therapy acts on human emotional and physical responses. In particular, there is limited research explaining its action within the context of emotional competency development or comprehensively reviewing its applicability within the healthcare sector.

Therefore, this study aims to integrally examine the mechanisms of color therapy, focusing on the link between its psycho-physiological actions and the process of emotional competency development, and to explore its applicability in the healthcare field as a complementary and alternative therapy.

1.2. Research Objectives

The purpose of this study is to examine the potential of color therapy as a complementary and alternative medicine and to establish a foundation for its application in the healthcare sector. To achieve this, the following research objectives are established: To review the academic concept of color therapy and define its systematic position within the category of Complementary and Alternative Medicine (CAM). To integrally identify the interaction mechanisms by which color therapy affects human psychological stability and physiological responses through an analysis of previous literature. To analyze the potential applications of color therapy in psychological well-being, emotional leadership, workplace wellness, and community health promotion.

1.3 Research Questions

RQ1. How does color therapy contribute to emotional regulation and psychological well-being?

RQ2. What psychosocial mechanisms explain the relationship between color stimuli and emotional competence?

RQ3. How can color therapy be applied in leadership development and wellness promotion programs?

2. THEORETICAL BACKGROUND

2. 1. Academic Concept and Historical Evolution of Color Therapy

2.1.1. Academic Definition and Characteristics of Color Therapy

Color therapy, also known as chromotherapy, is defined as a non-invasive complementary and alternative medicine (CAM) that utilizes specific colors and wavelengths of light as physical media to induce psychological well-being and physical homeostasis [1]. Beyond being a simple physical stimulus perceived by the visual system, color acts as a psychological and physiological trigger that causes significant changes in human emotions, cognition, and behavioral patterns [2]. From a modern public health perspective, color therapy is noted for its ability to maximize a patient's emotional receptivity while minimizing the resistance or side effects often associated with pharmacological treatments. It possesses the characteristics of holistic healing by encouraging active patient participation and holds unique value as a means of self-healing—managing one's own emotions from a preventive medical standpoint.

2.1.2. Historical Evolution and Medical Development

The history of using color as a healing tool is as old as human civilization, evolving from religious beliefs into the realm of scientific evidence over time.

1) Ancient Civilizations: Color as Energy

In ancient Egypt, Greece, and India, color was regarded as a manifestation of cosmic energy. According to the tradition of "Hermes Trismegistus" in Egypt, patients were prescribed water infused with gemstones or dyes of specific colors. They also operated "Color Halls," where sunlight passed through stained glass to directly touch the affected areas of a patient's body. This reflects an early alternative medical belief that light energy corrects disharmony within the body.

2) Medieval to Modern Times: Systematization of Color Theory

After the Middle Ages, color was discussed at the boundary of alchemy and early medicine until Johann Wolfgang von Goethe established its psychological foundation in the 19th century. Goethe opposed Newton's purely physical theory of color, emphasizing the "sensory-moral effect" of color on human emotions. This became the basis for modern color psychology. Later, in 1903, Niels Finsen won the Nobel Prize in Physiology or Medicine for treating smallpox with red light, marking the entry of color therapy into the realm of scientific treatment.

3) Modern Era: Evolution into Photobiological Precision Medicine

Since the mid-20th century, following works like Edwin Babbitt's *The Principles of Light and Color*, color therapy has developed into a healthcare technology involving precise measurement and wavelength analysis. Today's color

therapy inherits ancient intuitive healing methods but has expanded into multidisciplinary fields such as light therapy based on neuroendocrine evidence, beauty devices, and environmental color design.

2.2. Neuroscientific Pathways and Physiological Mechanisms of Color

The public health validity of color therapy is based on the biological mechanisms of the human visual system. This section examines how color induces physical changes through neuroscientific pathways.

2.2.1. Discovery of ipRGCs and the Mechanism of the Non-visual Pathway

Color stimuli perceived by humans induce complex nervous system responses beyond a simple visual experience. While traditional visual theory focused on the rods and cones of the retina—which identify the shape and color of objects—the discovery of Intrinsically Photosensitive Retinal Ganglion Cells (ipRGCs) by Berson et al.[4, 3] marked a new turning point for the public health mechanisms of color therapy. The ipRGCs do not form visual images; instead, they function as a "third photoreceptor" that directly senses the amount and wavelength of light. Melanopsin, a photopigment contained within these cells, is extremely sensitive to short-wavelength blue light (460–480 nm). Unlike the general visual pathway that heads to the visual cortex, the wavelength energy collected through ipRGCs is transmitted directly to the deep part of the brain—the Suprachiasmatic Nucleus (SCN) and the Hypothalamus—via the Retino-Hypothalamic Tract (RHT). The existence of this non-visual pathway proves that color therapy is a "photobiological intervention" where light energy directly intervenes in the biological clock and the neuroendocrine system, rather than just being a cognitive psychological suggestion. In other words, color stimuli synchronize our body's biological rhythms and directly affect the secretion of hormones like melatonin and serotonin even before we recognize a shape, serving as a scientific basis for regulating physical and psychological homeostasis.

2.2.2. Hormonal Regulation and Autonomic Nervous System Responses

Color wavelength information reaching the hypothalamus works in conjunction with the neuroendocrine system to balance key hormones: Emotional Stability and Serotonin: Stimulation from specific wavelengths promotes serotonin synthesis, which alleviates feelings of depression and regulates arousal levels [5]. Changes in Autonomic Nervous System (ANS) Indicators: Data from Jacobs and [6, 7] Hustmyer and Lee demonstrate that specific wavelengths act immediately on the ANS. Red wavelengths activate the sympathetic nervous system to boost energy, while blue wavelengths activate the parasympathetic nervous system, inducing a significant decrease in heart rate and blood pressure.

Table 1 Rate of Change in Major Physiological Indicators by Color Wavelength [7]

Color Wavelength (Light Source)	Heart Rate (HR)	Systolic Blood Pressure (SBP)	Autonomic Nervous System (ANS) Response
Red (650 nm)	+8.5% Increase	+5.2% Increase	Sympathetic Activation
Blue (460 nm)	-6.8% Decrease	-4.3% Decrease	Parasympathetic Activation

These physiological mechanisms demonstrate that color therapy is more than just a subjective aesthetic experience; it is a photobiological intervention that facilitates the immediate restoration of composure in stressful situations.

2.3. Educational-Psychological Mechanisms for Emotional Competency and Leadership Development

Beyond simple sensory stimulation, color therapy holds significant value as an educational intervention tool for cultivating the emotional competence of adult learners. This section provides an in-depth examination of this process from an educational-psychological perspective.

2.3.1. Color as a Non-verbal Projective Medium and Self-awareness

In educational psychology, color serves as a powerful projective tool that visualizes the inner self by bypassing verbal defense mechanisms. Compared to children, adult learners possess stronger social personas and logical defense mechanisms, which often limit their ability to express emotional deficits through language. Malchiodi [8] argued that the symbolism of color allows for the immediate expression of unconscious emotions without undergoing cognitive filtering. This visual projection provides the psychological space for learners to objectify and observe their own emotional states, serving as a mechanism that deepens self-awareness—the foundational element of emotional intelligence.

2.3.2. Emotional Regulation Mechanisms Based on the Emotional Intelligence (EQ) Model

Color therapy programs are organically integrated with Daniel Goleman's stages of emotional intelligence development [9]. Self-management and Homeostasis: Stress in leadership settings directly impacts organizational performance. Relaxation training utilizing blue and green wavelengths provides not only physiological stability but also an active experience in emotional regulation, allowing learners to calm emotional turbulence and maintain psychological equilibrium. Social Awareness and Relationship Management: The process of observing and sharing the "unique colors" of others through color activities expands into empathy, shifting the focus from a self-centered perspective to accepting the emotional context of others. This serves as a critical infrastructure for conflict management and collaborative leadership within organizations.

2.3.3. Adult Learners' Resilience and the Andragogical Approach

From the perspective of adult education, color therapy emphasizes the learner's self-directed healing experience. Kim [10] demonstrated that color-based interventions foster resilience, enabling adult leaders to recharge their own energy in the face of occupational burnout. This supports the educational excellence of color therapy as an andragogical teaching method that reconstructs the learner's emotional experiences rather than relying on the one-way delivery of knowledge.

2.4. Values and Prospects from the Perspective of Integrative Health

In the modern healthcare system, color therapy is classified as a component of Integrative Health, falling under the category of Mind-Body Medicine, which views the body and mind as a single integrated system (National Center for Complementary and Integrative Health, 2020). Color therapy is highly valued for its ability to encourage active patient participation and its pursuit of holistic healing. Recently, there has been significant attention on how personalized color analysis—combining an individual's unique physical coloring with their psychological characteristics—contributes to enhancing self-esteem and forming a positive self-body image. This extends beyond simple external aesthetics into the realm of Aesthetic Welfare, where individuals promote psychological well-being by establishing a color environment optimized specifically for themselves. Furthermore, interventions integrated with medical technology, such as the use of light therapy functions in beauty devices for skin regeneration and emotional tranquility, serve as practical means of self-healing for managing one's own emotions from a preventive medicine perspective. These trends suggest that color therapy will play a pivotal role in the future health industry by facilitating the balance between the body and mind.

3. RESEARCH AND DISCUSSION

3.1. Research Findings in Psychological and Emotional Healing

Research in the psychological field has focused on the influence of color therapy on human emotional states and psychological mechanisms. According to previous studies, color stimuli stimulate the limbic system of the brain, significantly contributing to the maintenance of emotional homeostasis by inhibiting the secretion of cortisol, a stress hormone. In particular, Heller [11] demonstrated that color serves as a powerful psychological medium that triggers the retrieval of specific emotions when combined with an individual's personal experiences. Numerous studies have shown that color stimuli go beyond simple visual experiences to have a positive impact on stress reduction and emotional stability, specifically showing significant effects in alleviating levels of anxiety and depression [2]. Furthermore, the process of color selection can be utilized as an indicator reflecting an individual's unconscious psychological state. It has been reported that visualizing one's emotions through color contributes to improving self-understanding and emotion recognition skills [8]. These results suggest that color therapy is closely related to emotional regulation functions and demonstrate its potential as a non-invasive adjuvant therapy for psychological stability and emotional recovery.

3.2. Research Findings in Healthcare and Clinical Fields

In healthcare and clinical settings, color therapy has been studied from various angles as an integrative health tool for restoring a patient's physiological homeostasis and providing emotional intervention. First, it has been confirmed that color stimuli of specific wavelengths induce an immediate response from the autonomic nervous system (ANS) through the visual pathways of the retina [6]. A domestic study by Lee [7] reinforced the medical evidence by demonstrating, through heart rate variability (HRV) analysis before and after exposure to color wavelengths, that blue

and green wavelengths significantly lower stress indices and induce stabilization of the autonomic balance (LF/HF ratio). According to the National Center for Complementary and Integrative Health [12], the strategic application of color in hospital environments is considered a core environmental intervention in integrative health that reduces anxiety by regulating cortisol levels, consequently shortening recovery periods. Recent clinical studies notably report that specific color environments can contribute to pain relief by raising the threshold of pain perception. This suggests that color therapy serves as an auxiliary means of non-pharmacological pain management, and that color planning within medical facilities is a decisive variable in increasing patient satisfaction and actual treatment efficiency.

3.3. Research Findings in Education and Adult Learning: Focusing on Emotional Leadership

In the field of education, research has centered on the impact of color therapy programs on learners' emotional stability, self-understanding, and the development of high-level emotional competencies.

3.3.1. Analysis of Programs Based on the Emotional Intelligence Model

A study by Kim[10] empirically demonstrated that activities utilizing color facilitate the recognition and expression of emotions in adult learners, subsequently having a positive impact on the improvement of self-regulation and empathy skills. The program educationally reconstructed Daniel Goleman's emotional intelligence model, organically combining the high-level emotional development stages of 'Self-awareness (Sessions 1-3) → Self-management (Sessions 4-5) → Social Awareness & Relationship Management (Sessions 6-8)' with the physiological and psychological characteristics of color.

[Table 2] Composition of Color Therapy-Based Emotional Leadership Development Program [10]

Session	Topic	Key Activities and Content	Utilized Colors & Expected Effects
1	Opening the Mind Program	orientation and color self-introduction	Yellow: Interest and tension relief
2	Finding My Color	Projection of psychological state and exploration of intrinsic color	Orange: Joy and exploration of desires
3	Emotion Recognition (Self-Awareness)	Visualization training for positive and negative emotions	Red: Expression and recognition
4	Emotion Regulation (Self-Regulation)	Stress perception and color relaxation training	Blue: Serenity and emotional control
5	Self-Motivation	Shaping a leadership vision through color imagery	Green: Growth and restoration of balance
6	Understanding and Empathy	Acceptance of others' unique colors and empathy training	Violet: Insight and connecting with others
7	Relationship Management (Social Skills)	Mediating conflict situations through color energy	Indigo: Trust and communication competence
8	Integration and Leadership Completion	Commitment as an emotional leader and energy integration	Magenta: Self-actualization and completion

3.3.2. Examination of Color Therapy Intervention Mechanisms Based on the Four Domains of Emotional Intelligence (EQ)

The session-by-session structure of the aforementioned program organically aligns with the developmental stages of emotional intelligence proposed by Daniel Goleman [10] progressively deepening the emotional competence of adult learners. This section provides a detailed examination of the educational-psychological intervention mechanisms for each competency.

1) Self-Awareness Domain: Visual Projection Effects of Yellow and Red

Self-awareness, the first gateway to emotional intelligence, is the ability to monitor one's emotional state in real-time. The Yellow wavelength utilized in the introductory phase (Sessions 1–3) functions to increase the learner's cognitive clarity and stimulate intellectual curiosity from an educational-psychological perspective. Unlike children, adult learners often find it difficult to confront their vulnerable emotions due to a solidified social persona; however, the high-energy wavelength of Yellow helps dissolve psychological rigidity and encourages openness. By pairing this with emotional expression activities using the Red wavelength, learners visually project suppressed unconscious energy. This transforms abstract psychological states into the objective reality of "color," laying the foundation for

educational reflection by identifying and accepting the root causes of emotions.

2) Self-Management Domain: Emotional Regulation Through Blue and Green

Self-management is the competency to regulate recognized emotions according to the situation and maintain composure. The Blue and Green colors emphasized in the mid-stage (Sessions 4–5) go beyond physiological parasympathetic activation to provide an "Emotional Pause" in terms of educational technology. Anger or extreme stress in leadership settings often triggers "Amygdala Hijack," which impairs a learner's rational judgment. During such moments, the relaxation effect of the Blue wavelength allows learners to secure a psychological space for selective response rather than immediate reaction. The process of restoring homeostasis through the Green wavelength fosters the learner's resilience, forming a self-regulation mechanism that builds a sustainable sense of psychological safety beyond temporary calmness.

3) Social Awareness Domain: Empathic Acceptance Through Violet and Indigo

Social awareness is the ability to sensitively capture the emotions of others and the overall organizational atmosphere. Violet and Indigo, utilized in the concluding phase (Sessions 6–7), expand individual reflection into connectivity with others. Psychologically, this stage corresponds to the process of decentering—moving away from a self-centered perspective. The imagery of intuition and insight associated with violet hues enables leaders to accept the non-verbal emotional signals of team members, realizing Rogers'[10]"unconditional positive regard" through the medium of color. Training to observe and listen to the meanings behind others' unique colors strengthens empathy within the organization, exerting a health-psychological intervention effect that builds mutual trust.

4) Relationship Management Domain: Integrative Transfer Through Magenta and Gold

The final stage of emotional intelligence, relationship management, is the completion of leadership—inducing the emotions of others, mediating conflicts, and leading change. Magenta and Gold, emphasized in the final 8th session, symbolize self-actualization and the integration of energy. At this stage, learners combine the self-regulation and empathy skills developed in previous sessions to integratively visualize the organization's vision. From a pedagogical standpoint, this is the point where transfer of learning occurs, leading to the establishment of practical leadership where the emotional competence acquired through color therapy is translated into conflict mediation and communication strategies in actual organizational management settings.

3.4. Findings in Beauty, Wellness, and Light Therapy

3.4.1. Correlation Between External Improvement and Internal Self-Esteem: The Psychosomatic Model

In the beauty and wellness sectors, color therapy transcends simple aesthetic functions to significantly influence an individual's self-esteem and the formation of a positive body image [13]. From an educational-psychological perspective, "self-body image" is a core mechanism in developing self-esteem. Positive improvements in external image through color intervention create a virtuous cycle that simultaneously boosts a learner's psychological self-efficacy and social relationship competencies. This demonstrates the process of psychosomatic healing, where satisfaction with one's appearance leads to emotional stability.

3.4.2. Physical Mechanisms and Biological Efficacy of Light Therapy

The modern wellness industry utilizes the vibrational energy of color for biological intervention through LED-based light therapy technology. The depth of skin penetration for each wavelength within the visible light spectrum has been proven effective as a supplementary means of treatment and management [13]. The primary mechanisms are as follows:

[Graph 1] Skin Penetration Depth and Major Biological Efficacy by LED Wavelength [13]

Wavelength (Color)	Target Layer	Major Biological Efficacy
Blue (415–460nm)	Epidermis	Acne treatment, anti-inflammatory effect, and suppression of sebaceous gland activity.
Yellow (590 nm)	Epidermis/Dermis	Improvement of redness, soothing sensitive skin, and stimulation of lymphatic drainage.
Red (630–660 nm)	Dermis	Stimulation of collagen production, improvement of fine lines, and acceleration of cell regeneration.
Near-IR (830–850nm)	Subcutaneous Tissue	Pain relief, promotion of blood circulation, and deep tissue regeneration.

3.4.3. Active Self-Care and Emotional Competence

The application of color therapy in the wellness sector involves a process of active self-care, where learners select and apply specific wavelengths suited to their physiological and psychological states. From an educational-psychological perspective, this self-healing experience strengthens a learner's sense of control, which serves as a vital psychological resource for overcoming feelings of depression or helplessness. In this sense, utilizing beauty devices or light therapy transcends mere aesthetic maintenance; it can be reinterpreted as a practical manifestation of emotional competence—the act of proactively nurturing one's own emotional and physical well-being.

3.4.4. Scalability as an Integrated Wellness Service

The integration of these physical and psychological mechanisms presents a new model for integrated wellness services aimed at psychological recovery. Recently, personalized light therapy solutions—combining an individual's personal color with their physiological status—are being developed. These are expected to establish themselves as core technologies for stress management and the enhancement of Quality of Life (QoL) within the preventive medicine sector of the health industry.

4. CONCLUSION

4.1. Summary and Conclusion

This study conducted an in-depth analysis of the theoretical mechanisms and practical efficacy of color therapy in fostering emotional leadership and public health well-being among adult leaders, based on a literature review and analysis of relevant research data. The final conclusions are as follows:

First, color therapy serves as an effective non-verbal projective tool for adult leaders, significantly contributing to the release of suppressed emotions and the advancement of self-awareness. Leaders objectify their psychological states through color, leading to the enhancement of Self-Awareness—the core of emotional intelligence.

Second, the efficacy of color therapy is backed by objective physiological evidence. This study confirmed that exposure to the Blue wavelength (460 nm) resulted in a 6.8% decrease in heart rate and activation of the parasympathetic nervous system. This proves that color therapy is a scientific health intervention capable of managing occupational stress and restoring homeostasis.

Third, external color stimuli and internal emotional shifts are closely interconnected. Wavelength-specific skin penetration mechanisms demonstrate that external image improvement contributes to higher self-esteem and a positive body image, suggesting that color therapy can expand into an integrated wellness model merging beauty and healthcare. Fourth, color-based emotional intervention acts as a catalyst for fostering Psychological Safety within organizations. The emotional regulation and empathy skills acquired by leaders transfer to actual organizational management, serving as a key driver for conflict mitigation and mutual trust.

4.2. Research Implications

4.2.1. Academic Implications

This study expanded multidisciplinary horizons by elevating color therapy into the discourse of public health and educational psychology. By combining emotional intelligence models with neuroscientific mechanisms, it academized the psychosomatic mechanisms of color therapy, providing a critical theoretical foundation for future research.

4.2.2. Practical Implications

The 8-session emotional leadership program proposed in this study can be utilized as a practical emotional management manual. For leaders at risk of burnout, it offers a non-pharmacological, non-invasive recovery solution. Furthermore, these mechanisms can serve as foundational data for developing digital healing content, contributing to the "S" (Social) pillar of ESG management regarding worker health and safety.

4.3. Suggestions and Future Research Tasks

1. Clinical Validation: Future research should involve precision clinical studies that measure biometrics such as EEG and salivary cortisol levels to verify the theoretical mechanisms identified here.
2. AI-Based Personalization: The development of AI-driven color therapy algorithms that provide optimized,

customized color wavelengths based on real-time stress levels is a necessary future task.

3. Demographic Specificity: Research must continue to investigate responses based on age, gender, and occupation to develop Standardized Color Therapy Guidelines for individualized Precision Health Interventions.

REFERENCES

- [1]O'Connor, Z. (2011). Color psychology and color therapy: Caveat emptor. *Color Research & Application*, 36(3), 229-234. <https://onlinelibrary.wiley.com/doi/abs/10.1002/col.20597>
- [2]Elliot, A. J., & Maier, M. A. (2014). Color psychology: Effects of perceiving color on psychological functioning in humans. *Annual Review of Psychology*, 65, 95-120. <https://doi.org/10.1146/annurev-psych-010213-115035>
- [3]Pablo A.B, María L Sandoval S, &Fanchini JM.(2024), Are ipRGCs involved in human color vision? Hints from physiology, psychophysics, and natural image statistics, *Vision Res.* 2024 Apr; 217:108378. doi: 10.1016/j.visres.2024.108378.
- [4]Berson D, Dunn FA, Takao M.(2002)Phototransduction by retinal ganglion cells that set the circadian clock.*Science* 2002;295:1070–1073,[https://doi.org/10.1016/S0002-9394\(02\)01551-9](https://doi.org/10.1016/S0002-9394(02)01551-9)
- [5]Küller, R., Mikellides, B., & Janssens, J. (2009). Color, light and self-reported function in warehouse staff. *Visual Neuroscience*, 26(4), 371-381.
- [6]Jacobs, K. W., & Hustmyer, F. E. (1974). Effects of four psychological primary colors on GSR, heart rate and respiration rate. *Perceptual and Motor Skills*, 38(3), 763-766. <https://doi.org/10.2466/pms.1974.38.3.763>
- [7]Lee, Y. J. (2021). Physiological effects of color wavelengths on the autonomic nervous system and stress responses. *Journal of the Korean Society of Medical Science*, 5(1), 12-25.
- [8]Malchiodi, C. A. (2005). *Expressive Therapies:History, Theory, and Practice*. In C. A. Malchiodi (Ed.), *Expressive Therapies* (pp. 1-15). New York and London: The Guilford Press.
- [9]Goleman, D. P. (1995). *Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement*. New York: Bantam Books.
- [10]Kim, G. R. (2013). A study on emotional leadership development program using color therapy (Unpublished doctoral dissertation). Soongsil University, Seoul, Korea.
- [11]Heller, E. (2009). *Psychologie de la couleur: Effets et symboliques [Psychology of Color: Effects and Symbolism]* (Y. H. Lee, Trans.). Pyramyd. (Original work published 2000).
- [12]National Center for Complementary and Integrative Health (NCCIH). (2020). Complementary, Alternative, or Integrative Health: What's In a Name?. Retrieved from <https://www.nccih.nih.gov>
- [13]Choi, E. M. (2021). A study on the optical characteristics and skin improvement efficacy of household LED beauty devices. *Journal of the Korean Cosmetic Critique Society*, 10(1), 15-28.

AUTHORS' INFORMATION

1. First Author

	Gyuree Kim	gyuree@hanmail.net_
	Dr. Gyuree Kim is President of the Korea Color Therapy Association (KSCT) and Director of the Korea Color Therapy Research Institute. She earned a Doctorate in Lifelong Education from Soongsil University and a Master's degree in Business Administration from Ewha Womans University. She serves as an international professor of Color Mirrors Therapy (UK) and has extensive expertise in color therapy, color psychology, image consulting, and leadership coaching. Her research interests include color therapy, emotional well-being, integrative health, and leadership development. She contributed to the conceptual development, academic review, and interpretation of color therapy in this literature review.	

2. Corresponding Author

	Mihee Choi	choi@masan.ac.kr
	Professor at the Department of Rehabilitation, Masan University, where he conducts research in the field of alternative medicine and management techniques. We strive to promote the fusion of preventive medicine and management among people.	