

Light therapy: Does it play an important role in Mental Health?

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According to Lam¹ based on his observations, research and literature review, initial use of light therapy in psychiatry arose from circadian rhythm hypotheses for seasonal and non-seasonal depression. Suppression of human melatonin generally requires greater than 2,000 lux in terms of intensity of light. Exposure of patients to 2,500 lux white light for three hours in the morning and three hours in the evening may confer beneficial effects on mood. It is further suggested that there are no absolute contraindications to light therapy and there is no evidence that it would cause ocular or retinal damage. However, patients with ocular risk factors should have baseline ophthalmological consultation prior to starting light therapy. In a double-blind randomized controlled trial, patients who underwent three weeks of pale blue Bright Light Therapy showed significantly improved depression scores and sleep patterns compared with those who received placebo through dim red light and a 81% difference in increased melatonin levels.² It was concluded in the same study that in elderly patients with major depressive disorder, Bright Light Therapy improved mood, enhanced sleep efficiency and increased the upslope of melatonin level gradient. Another analysis of randomized, controlled trials suggests that bright light treatment and dawn stimulation for seasonal affective disorder and bright light for nonseasonal depression are efficacious with effect sizes equivalent to those in most antidepressant pharmacotherapy trials.³ A book review described atypicality of seasonal affective disorder and marked improvement within four to five days of beginning light treatment.⁴ A Canadian randomized controlled trial on effectiveness of light therapy and fluoxetine in patients with Seasonal Affective Disorder (SAD) concluded, that light treatment showed earlier treatment response onset and lower rate of some adverse events relative to fluoxetine but there were no other significant differences in outcome.⁵

Based on the research on human circadian rhythm, light treatment devices using efficient light-emitting diodes (LEDs) with concentrated short wavelengths in the form of a device was tested in a randomized, double-blind, placebo-controlled, multi-center trial. The results were consistent with the hypothesis that the Litebook device was an effective therapy for SAD.⁶

The most discussed treatment in literature is the efficacy of light treatment in Seasonal Affective Disorder

(SAD) which is described as a subtype of major depression with seasonal pattern. It has been suggested that bright light therapy in the early morning, using a light box or dawn simulation, appears to be a reasonable first-line approach to relieve depressive symptoms.⁷

A study⁸ noticed modest improvement in depressed mood after a single active light session.

Another study⁹ viewed the association between temperament and daily light exposure. The conclusion was that illuminance of daytime may be related to both cyclothymic and hyperthymic temperaments but that the associations lie in opposite directions.

There is a growing advocacy for effectiveness of light therapy even in normal depression of day to day life.¹⁰ In the local context of Pakistan, seasonal mood disorder do exist despite plenty of sunlight and being a tropical country. The winter months are problematic as such season related depression has been noted by a number of individuals. An environmental based study¹¹ in Pakistan revealed depressive mood during the extremes summer and winter with a prevalence rate of 67% with slightly higher preponderance among females (51%) than males (49%). Females in this study reported more depressive symptoms (66.6%) than males (33.3%). Depressive symptoms were higher among the age range 41-60.

While this study mentioned extremes of summer and winter, a study¹² in Middle East reveals depression in extreme hot summer weather when people are more isolated in their homes and get the depressive symptoms.

The use of light therapy had hardly been mentioned in tropical countries including Pakistan but there is evidence of its benefit in seasonal depression. With less severe side effects and benign nature of treatment, light therapy may find its application and use in this part of the world. With the advocacy for holistic approach in treating mood disorders, it would be a worth addition in the existing tools for management of mental health disorders. Wouldn't it be?

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