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## Effects of Luminous Furniture on Mood

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#### Abstract

Psychological lighting research mostly deals with light effects of lighting, which are above eye-level. This research explores the effects light of a luminous furniture on customer's mood. A laboratory experiment and quasi-experimental method were conducted. The first experiment was intended to identify two variables of a luminous furniture. The quasi-experiment evaluates various effects of lights of two sets of a café luminous furniture. In this experiment, seventy students were involved to report their feelings toward three different luminous furniture settings. The data was analyzed using ANOVA statistic. The result shows that the constant setting of a luminous furniture was the most favorable in influencing people's mood.

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Keywords: Luminous furniture; interior lighting; dining space; mood

### 1. Introduction

Human needs sunlight to grow, survive and keep healthy. However, every group of a population may expect daylight exposure differently to one another. Some may expect less exposure to daylight than the other because of different geographical characteristic they live in relation to yearly sun altitude. Some other may call for a different portion of sun exposure to get the benefit of it. In fact, excessive exposure to sunlight may be harmful to health. Such biological needs of human to daylight seem to give effect to their

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psychological dependence on sunlight to achieve a complete state of health. According to WHO, healthy individual is achieved when one is physically, mentally and socially well performed. In order to maintain such condition, people who often feel stress from working or any other daily routine activities would regularly seek places for health restoration. In response to this, researchers or design scientists continually explore prospective elements from the environment including light sources that have a capacity to restore human behavioural problems.

Interestingly, it has been obvious that human feel good and perform better work when they have access to daylight either through windows or other openings of the building. The changes of light quality throughout the day can influence people's behavior. Some people who have prolonged lack of daylight could suffer from seasonal affective disorder (SAD), and a specific therapy using artificial light has been created to respond to such illness. Such daylight-human dependency prompts people to keep finding ways in the use of the artificial source of light to create specific effects of light, which can represent the true nature of daylight. This effort is highly relevant for those who are less or not at all exposed to daylight and need a particular quality of lighting to support their daily or routine activities. It may also associate with those who need restorative effect of light to solve their behavioural problems. For instance, this occurs because of geographical constraint or building characteristic that they live in like people who live or work in a basement or other space that is far from the windows. After working the whole week in the bright light office, people may need to do relaxation by spending some time in a café; that applies a low level of illumination. Therefore, various approaches to designing lighting effect have been explored to respond to such needs. Previous studies on the function of interior lighting in meeting the need for acquiring positive emotion have been conducted. For instance, People like to see lighted wall surfaces better than being in a lighted area (Veitch, 2001). Essentially, studies on the manipulation of artificial light to create various effects of daylight to expect more positive behavioural responses are becoming crucial. This trend occurs because people may have opportunity to face a health problem from an ineffective metabolism, as a result of uncertain hormone (plasma melatonin and cortisol) production problem. Huge lighting industry like Philips has great interests in developing lighting fixture to replicate various effects of light to meet more complex function of lighting. Mimicking the effects of sunlight with artificial lighting would be very challenging, because, its quality may seem countless in number. As well, it is sometimes unpredictable in terms of how people can appreciate its presence. Daniel Rybakken, Norwegian young designer's predicts that people sometimes feel the effect of sunlight subconsciously.

However, in so far, there are no studies that explain whether customers feel differently in response to the effect of lighting on a different location in the room, with reference to the customer's eye level. Therefore, systematic investigations are needed to be able to discover and define new quality effect of light that can meet human particular needs of lighting. This project investigates whether the differentiating location of lighting source in café interiors can affect the observers' moods.

#### 2. Literature study

#### 2.1. Moods as predictor of consumer behavior

Moods relate to emotion. However, it is not like emotion where some persons can have the same emotion because of a certain event. People experience a specific mood personally. According to McCloughan et. al. (1998), moods are defined as subjective expressions of a person's basic feelings at a certain point in time. It can turn out to a person carry out a simple daily activity. People may have a bad mood just because they did not get enough sleep or are having psychological problem like depression or stress, or health problem. In such situation, people often suffer negative moods (i.e. anxiety, depression), which usually discourage them from doing other daily activities, like eating, going out or meeting friends.

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