

(S.B. 513)

(No. 9-2023)

(Approved January 12, 2023)

AN ACT

To designate September 6 of each year as “Color Blindness Awareness Day”; direct the Department of Health and Department of Education to develop activities to raise awareness and educate about this condition; and for other related purposes.

STATEMENT OF MOTIVES

According to the American Academy of Ophthalmology,¹ color blindness occurs when you are unable to see colors in a normal way. It is also known as color vision deficiency. People who suffer from Color blindness generally cannot distinguish between certain colors. Color blind individuals are often unable to distinguish between greens and reds, and in some instances blues.

Some people with mild color deficiencies can see colors normally in good light but have difficulty in dim light. Others cannot distinguish certain colors in any light. The most severe form of color blindness, in which everything is seen in greyscale, is uncommon. Color blindness usually affects both eyes equally and remains stable throughout the person’s life.

Color blindness happens when there is a problem with the pigments in certain nerve cells of the eye that sense colors. In other words, these cells are unable to respond to light wavelength variations and such variations are what allows people to see a full range of colors.

¹ <https://www.aaopt.org/eye-health/diseases/what-is-color-blindness>

There are four known types of color blindness², these are: 1) Achromatopsia, which is a congenital condition and the most severe type of color blindness, where the patient can only see in greyscale (black, white, and gray); 2) Monochromacy, is when the person can only perceive light, and color is in just one dimension. This happens when only one (1) of the three (3) cone pigments (retinal photoreceptors) work; 3) Dichromacy, is when there is difficulty differentiating between red and green or blue and yellow. People with this type of color blindness only have two types of cone cells. This is a congenital condition caused by the absence of one of the retinal photoreceptors (they only have two cones); 4) Anomalous Trichromacy, is when the person has all of their three cone cell types, but with functional modifications or deficiencies which alter their color perception. This is the most common type of color blindness and people with this condition perceive colors in a manner similar to that of someone with dichromatic color blindness.

People are usually born with color blindness, but it can be developed later in life in some instances. A change in color perception can indicate the existence of a serious problem. There is no known treatment³ for this condition. However, there are special glasses and contact lenses that can help color blind people differentiate between similar colors.

Journalist Jorge Gelpí Pagán from the Wapa TV news prepared a special news report called “Living Among Grays” where he presented a detailed report on the causes of this condition; the number of people worldwide who have it, which is approximately three hundred (300) million; and also mentioned world renowned figures who are color blind. One of the points highlighted by this investigative

² <https://www.oftalvist.es/blog/daltonismo>

³ <http://medlineplus.gov/>

journalism piece is that there are no statistics regarding the people who suffer from this condition in Puerto Rico ⁴.

This special report stood out because it showed the cases of two people in Puerto Rico who have this condition. The first case was that of Alexis Borrás, an industrial design student at the Escuela de Artes Plásticas. Alexis realized he had the condition when he was a teenager, and it makes it difficult for him to identify or differentiate greens and reds. There is also the case of economist Francisco Montalvo who indicated that it was difficult to purchase groceries at a supermarket as he cannot distinguish whether a fruit or vegetable, such as a banana or a papaya, is ripe or not. The economist's case becomes even more complicated when driving on public roads as traffic lights pose a problem because he confuses reds with whites.

For these reasons, the Legislative Assembly deems it necessary for the Government of the Commonwealth of Puerto Rico to be a fundamental part of the multi-sectorial efforts to educate and raise awareness of this condition.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF PUERTO RICO:

Section 1.- September 6 of each year is hereby designated as “Color Blindness Awareness Day,” for the purpose of raising society’s awareness and knowledge of this condition.

Section 2.- The Governor of the Commonwealth of Puerto Rico shall issue a proclamation to such effects at least ten (10) business days before September 6.

Section 3.- The Department of Health and the Department of Education, in coordination with health and education organizations, are hereby directed to organize activities to raise the people’s awareness about this condition, and its manifestations, symptoms, prevention, diagnosis, treatments, as well as the care services available to persons with said condition, as the case may be.

⁴ <http://www.tucamarapr.org/dnncamara/Documents/Measures/ce077b9a-bc42-4c8b-8a3d-bf60623b5607.pdf>

Section 4.- This act shall take effect upon its approval.