Depression to expression: color as visual language to communicate complex emotions

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ABSTRACT

This aim of this study is to explore the potency of graphic design as an opportunity to communicate complex emotions and depression using color as a design strategy. The distinctive color identity is formulated by adopting a three-step methodological approach. Firstly, an online survey was conducted focused on understanding individual's color preferences and color-emotion associations. The survey analysis helped to derive the color identity for six basic emotions. Secondly, mind-mapping of symptoms of each depression type was done to branch out the basic emotions involved and thus, derive its first color-emotion derivative. Next, the value-saturation scale was redefined wherein value represented the intensity of emotion and saturation represented the severity of depression. Lastly, the color symbolism of that particular emotion in Indian culture was cross-referenced and thus, giving the second derivatives. This combination of first and second derivatives give the resultant unique color identities for eleven types of depression solely based on the emotional dimension of color. It was aimed to further explore the innumerable possibilities that can be achieved by experimenting with variation of color attributes. Hence, the research work proposed a methodology, which is in the initial development phase, to define the complex emotional experiences of depression through visual communication.

Keywords: *depression, emotion, color association, color preference, communication*

INTRODUCTION

According to the American Psychiatric Association, depression is a common and serious medical illness that negatively affects the way we feel, the way we think and the way we act. For this research, eleven types of depression are considered (as identified by National Institute of Mental Health, NIMH) based on the level of emotional complexity/severity. In descending order of its severity, the classification is as follows: psychotic, bipolar, clinical, persistent, postpartum, seasonal, depression due to illness, premenstrual dysphoric, substance-induced, subsyndromal and grief.

The human reaction to a color, a color combination and to the environment is always initially a psychological one (Mahnke 1996:6). The research assessed the potential of color to effectively describe emotions of depression based on the theory of color preference. The more enjoyment and positive affect an individual receive from experiences with objects of a given color, the more the person will tend to like that color (Schloss and Palmer 2011). Studies have found that people with depression or anxiety were more likely to associate their mood with the color gray, while happier people preferred yellow (Carruthers et al. 2010).

The formulation of color codes highlighted the other significant part of the research that was to identify the symbolism in context to Indian culture. Colors are the most essential defining factors of Indian culture and traditions. The ancient Indian scriptures and Vedic science recognize colors as a vital source of energy – positive and negative, validating the reason to study Indian color symbolism. The Ayurvedic approach to mental disease rests on the premise that most mental illness is caused by imbalances leading to clouding of the perception and loss of understanding (Behere et al. 2013).

For color derivation, RGB color mode was chosen as it provides more options and better control to produce unique colors by interaction between color attributes. Another reason to work with the RGB was considering the fact that the target age group of 18–45 years is more approachable through digital media. Working with RGB color mode also provided a platform for future exploration of the research.

The uniqueness of color identity was achieved by adopting a three-step methodological approach. Hence, the research work intends to formulate a visual language of color to express the complex emotions of depression and influence the way we think towards mental illness. It is to be noted that the research is still in an exploratory phase and is yet to be tested and validated by the experts.

METHOD

In order to gauge the extent of awareness individuals have about depression, as well as to discern the societal perceptions and attitudes towards people suffering from depression, an anonymous online survey was conducted. The survey also aimed at identifying the importance of colors in everyday life of an individual. The survey was divided into two sections: section one tried to explore an individual's color preference and color – emotion association, whereas section two tried to reflect on an individual's understanding of depression.

The online survey gathered 148 responses from different nationalities, prominently from India (62 responses) and different European countries (76 responses). The analysis reflects how color preferences are changed based on gender, age and cultural differences supplemented by mood, emotional connectedness and fondness. The generic preference of shades for each color was further studied based on gender, age-group, and nationality.

These findings clearly support the fact that color preferences are not universal and can reflect variation depending upon many factors such as demographics, cultural differences, etc.

Another major aspect of this survey was to understand how individuals relate colors to different emotions. The participants were given 9 color options namely, red, purple, blue, green, yellow, orange, white, black and brown to choose from for the six emotions: happiness, trust, surprise, fear, anger and sadness. The analysis of responses project that the individuals identify color for happiness as yellow, trust as green, surprise as red and purple, fear as red, anger as red, and sadness as blue and black. The color-emotion analysis chart (Figure 1) supports the fact that emotional connect to a color changes based on the geographical location of an individual and then of its cultural essence.

India has always been wrapped in a myriad of colors. It is difficult to imagine any aspect of an individual's lives without colors when we talk about India. The Indian mythologies and scriptures define the sanctity of colors in their culture. Hence, the research focused on exploring the expressive potential of color theories cross-referenced with connotations to Indian culture.

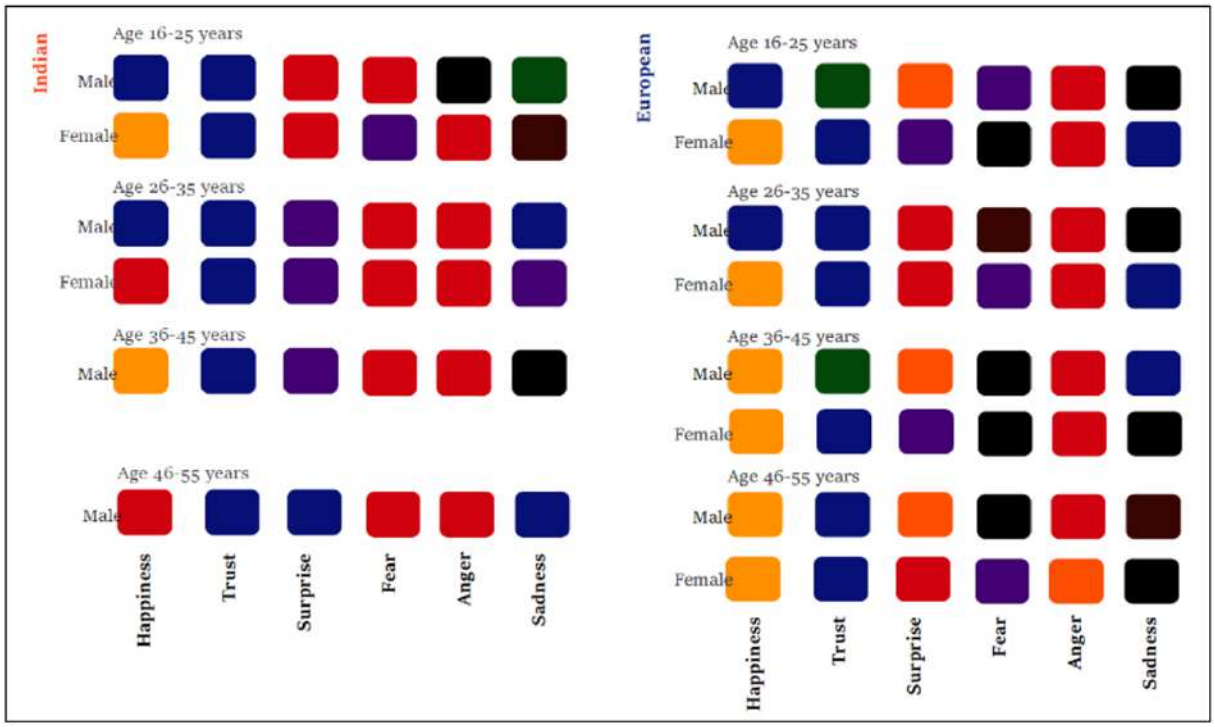

Figure 1: Color-emotion analysis categorized as per nationality, age-group, and gender used to derive the first results. Survey participants: Indian (left) and European (right). First two rows aged 16–25; subsequent two rows aged 26–35; aged 36–45; aged 46–55. Columns (left to right): Happiness, Trust, Surprise, Fear, Anger, and Sadness.

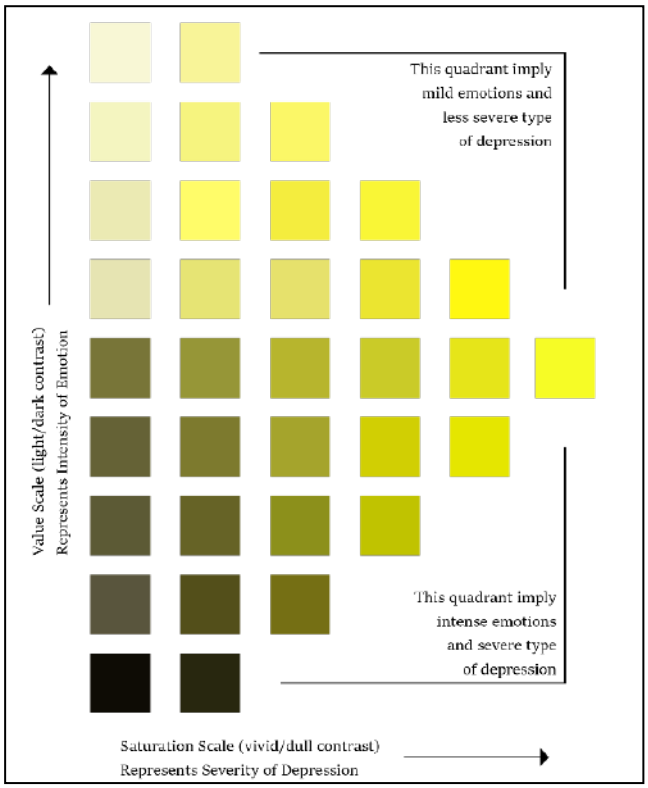

Figure 2: Value-saturation scale to extract second derivative based on intensity of emotion. Vertical axis represents the intensity of emotion (value scale, light-dark contrast); horizontal axis represents severity of depression (saturation scale, more or less saturated colors, vivid-dull contrast); top quadrant imply mild emotions and less severe type of depression; and, bottom quadrant imply intense emotions and severe type of depression.

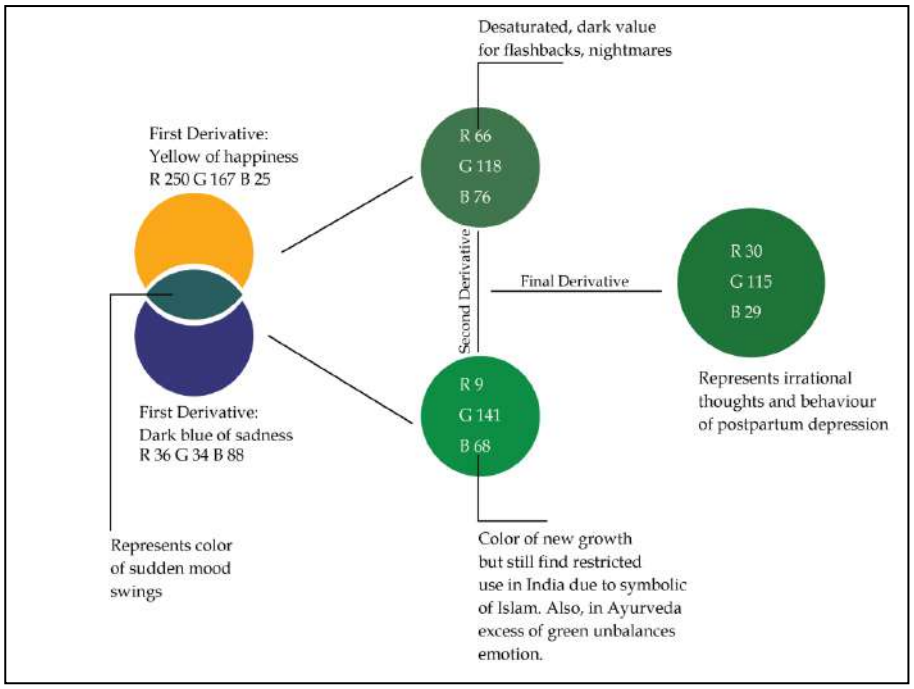

Figure 3: Three-step color derivation methodology for post-partum depression (experienced after child birth) (from left to right).

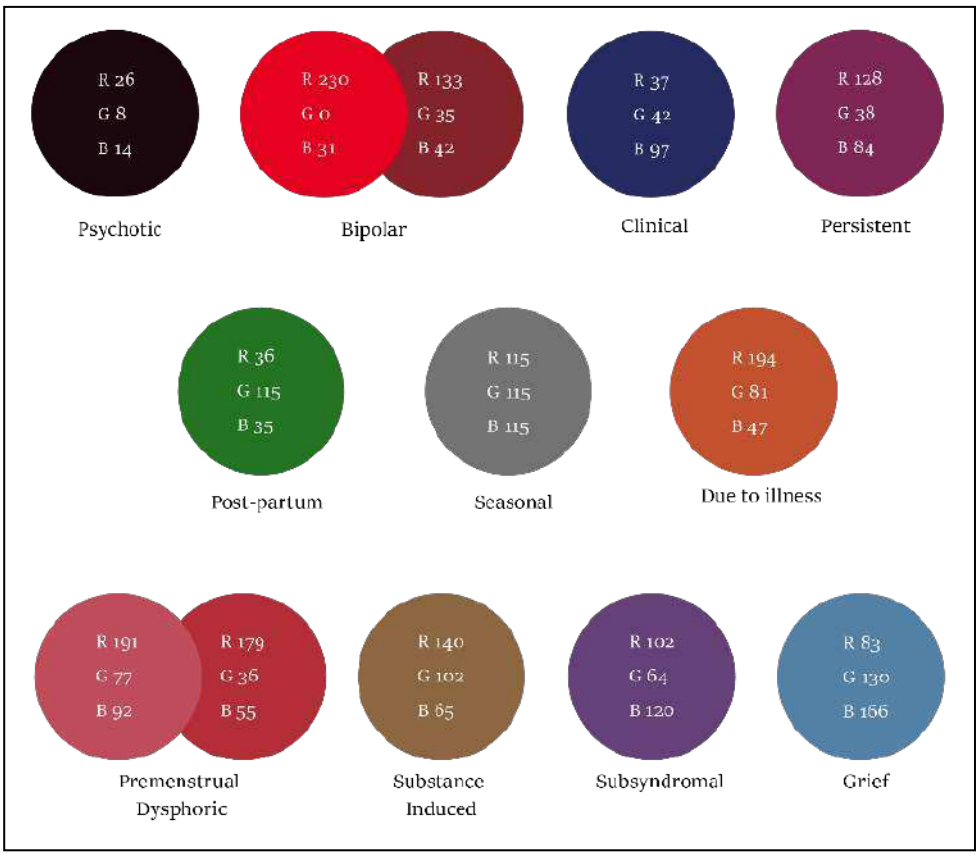

Figure 4: Distinctive color identity formulated for each depression type in descending order of severity (NIMH). Rows (left to right): psychotic, bipolar, clinical, persistent, post-partum, seasonal, due to illness, premenstrual dysphoric, substance induced, subsyndromal, and grief.

The next objective was to understand the willingness of people to talk about the topic of depression. In response to personal encounter with depression, individuals shared that either they had been through depression or someone they know suffered. However, the type of depression they suffered from was not disclosed in the survey. When individuals were asked to define depression, the majority identified depression as sadness or grief. Only 44.6% individuals identified depression as an illness. It denotes that a major segment of society does not see depression as a serious illness. Next, people were asked to show their agreement regarding statements related to depression which involved a mix of actual facts and myths about the illness. The responses reflected the amount of stigma surrounding depression.

Another important aspect to conduct this research work was to recognize that do individual's belief in the possibility of expressing emotions of depression through colors. The optimistic response by the majority of individuals strengthened the objective of this study.

The next step was to list down the symptoms of each depression type as identified by NIMH. Mind-mapping of symptoms helped to identify the basic emotion behind each depression type and derive the first hue to work on. The derived hue is further explored by working on other two-color parameters, value and saturation to define the intensity of emotion and severity of depression respectively (Figure 2). On the value scale, the relative degree of black and white varies depending upon the degree of an emotion in comparison to its basic emotion. Whereas saturation scale represented severity of depression where desaturated hue indicated the most severe form of depression whereas a saturated hue indicated the less severe form of depression. The point where no black nor white is added is pure hue representing that the equilibrium in balanced on value-saturation scale and is the state where only the basic emotion is experienced by the person. This point describes the normal mental state where basic emotions are felt as part of our daily life. Then, the hue derived from value-saturation scale and the hue significant or symbolic of that particular emotion in Indian culture is added to derive unique color identity (Figure 3).

RESULTS AND DISCUSSION

The survey analysis helped to derive hue for six emotions as first derivatives: yellow for happiness (R 255 G 168 B 4), bluish green for trust (R 11 G 144 B 158), pink for surprise (R 212 G 30 B 68), red for anger (R 237 G 29 B 39), dark red for fear (R 86 G 14 B 21) and dark blue for sadness (R 37 G 42 B 97). This first derivative hue combined with second derivatives (hue from value-saturation scale + hue with cultural connotation to India) gives the distinctive color identity to eleven types of depression taken into consideration for this study. Since the color derivation methodology is solely based on the emotional dimension, it is to be noted that only those symptoms of each depression type are taken into account that distinguishes it from the other, such as, hallucinations for psychotic depression, extreme ups and downs for bipolar and so on. Adopting the three-step methodology, the unique color code formulated are as shown in Figure 4.

CONCLUSION

In conclusive remarks, it can be said that the effect of colors on health, in general, has yet to be proven scientifically but the potential of emotional impact a color can have on an individual has been justified affirmatively with theoretical contextualization and analysis of survey results. The results establish color as a strong interactive visual tool to describe emotions and hence, giving each depression types its individuality.

The color code developed aims to act as a medium to spread awareness about depression and ultimately, recognize depression as worthy of deserving empathy. This is a future implication of the study that emphasizes that developed color code would encourage and initiate conversations about depression, and once people start accepting depression as a serious illness, the stigmas related to it will eventually be addressed and eliminated. In addition to above, the formulated color code may dispense a visual expressive tool to those going through depression. The color tool will prove to be the solution for the inability of people to put together words for their emotional experiences/ feelings when they are going through depression. It is noteworthy that color codes are formulated with a purpose to provide a tool for those suffering through depression to express their inner thoughts with near ones as well a medium for others as a part of society to understand about depression and the complex emotions involved so that they can extend their empathy to those suffering when required.

The uniqueness of color identities is based solely on the emotional symptoms. Thus, the research work established that color does follow the change of emotions. Any change in the intensity of emotion or severity of depression will eventually lead to change in hue and the new hue will convey a new emotion. Hence, the main motivation behind the research to develop an interactive visual medium to express complex emotion is fulfilled using color as the design strategy.

It is to be highlighted that the effectiveness of the color derivatives needs to be evaluated to study the reactions of the people. Also, the developed color codes need to be tested with people going through depression to study the practical application of color and emotion co-relationship.

Hence, the research work proposed a methodology, which is in the initial development phase, to define the complex emotional experiences of depression through visual language. This can be extrapolated further by addressing other contributing factors in occurrence of depression such as personality type, gender, etc., and thus study the proportional changes in color codes.

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