

## **"Moodpict" and "Feelpict": Implementation and validation of non-verbal approaches to the emotional benefit of cosmetics**

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### **Abstract**

**Background:** The objective of this study is to set up a simple and fast method to quantify the emotions and feelings of consumers during the use of cosmetic products. The chosen approach is a non-verbal cognitive approach through the presentation of images specifically selected for their emotional charge

**Methods:** Creation of a database of emotionally charged images and implementation of the psychometric measurement tools "Moodpict" and "Feelpict". The "Moodpict" questionnaire was developed to image the subjects' state of mind. The "Feelpict" questionnaire was developed to image the subjects' feelings about their skin.

As the project is under development, the full results will be presented at the conference in September 2022.

**Results:** The results of a completed study on facial care are presented. The two questionnaires developed here have proven to be useful to assess the impact of cosmetic products on subjects' emotions in a simple and quick way. Before and after a facial treatment, the Moodpict questionnaire showed that the subjects' overall emotional state had significantly improved, both through an increase in positive feelings and a decrease in negative feelings. The Feelpict questionnaire showed that the subjects' feeling about their skin improved significantly.

**Conclusion:** Compared to verbal approaches to expressing emotions, the "Moodpict" and "Feelpict" approaches developed require a lower mental load. The processing of images at the brain level is faster than for words. This approach allows a privileged and direct access to emotions, while being objective, fast and easy to implement with the subjects.

**Keywords:** Well-being; emotion; picture; Moodpict; Feelpict

## Introduction

Following the pandemic period, studies in the Beauty sector show changes in the buying habits and expectations of consumers. The definition of beauty has evolved and becomes more holistic. Consumers are better defining their needs and recognizing that there is no longer a single model of beauty that fits everyone (inclusive beauty); physical appearance is no longer the determining factor of beauty. In 2021, an international survey conducted by Euromonitor on the perception of beauty highlighted the importance of the appearance of health and attractiveness, regardless of biological age [1]. Consumers are now aware of the close links between physical and psychological states. The experience of positive emotions, feelings or affects is, in fact, essential to achieve happiness, fulfillment and satisfaction with one's life. This ultimately contributes to physical and emotional well-being.

The WHO defines health not as the absence of disease or infirmity but as a state of complete physical, mental and social well-being. The cosmetic product, by its actions of protection, cleaning, maintenance in good condition, perfuming, modification of the appearance and correction of body odors, participates actively in the three components of Wellness. Therefore, in addition to its biological effectiveness, it seemed important to us to study objectively the effects of the cosmetic product on psychological well-being.

Neuroscience has long been interested in the characterization of moods and emotions. The latter can be analyzed according to different components (expressive, physiological and cognitive) which all participate in the final expression.

The objective of this study is to set up a simple and fast method to quantify the emotions and feelings of consumers during the use of cosmetic products. The chosen approach is a non-verbal cognitive approach through the presentation of images specifically selected for their

emotional charge. Two types of questionnaires will be implemented: "Moodpict" and "Feelpict".

## **Materials and Methods.**

- *Creation of a database of emotionally charged images and implementation of the psychometric measurement tools "Moodpict" and "Feelpict"*

Many questionnaires have been developed to measure emotions and several of them have been used in marketing to assess the emotions provoked by the design of a new product.

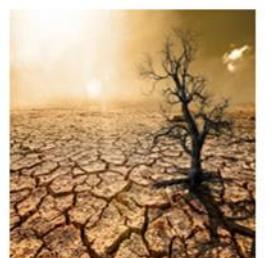
- The "Moodpict" questionnaire was developed from an analysis of a list of adjectives to describe an individual's feelings at a given time. Twenty-one questionnaires were collected in English and/or French versions. A frequency analysis of the adjectives used allowed us to select those that appeared to be relevant and important in describing a person's emotional state. Subsequently, a refinement of this list was carried out so that each state domain was represented: valence, activation and dominance. Thus, the resulting list characterizes 10 emotional states: (joy, happiness), (dynamism, fun), (caring, love), relaxation, (pride, confidence), sadness, (tiredness, boredom), anger, (stress, anxiety), (shame, vulnerability). Images related to these concepts were then selected for their strong evocative power. These images show people in various situations. For each state, a combination of 4 images is proposed in order to allow the subject to apprehend more easily the evoked situation. In each situation, the subject is asked to indicate how intense he or she feels at the moment on a 5-point scale ranging from 0 (not at all) to extremely (4). An overall increase in the score indicates an improvement in the subject's emotional state. The overall score can vary from 0 to 40; a value above 20 indicates a rather positive state.



Not at all       A little       Moderately       Quite a bit       Extremely

*Example of pictures for the [Joy, Happiness] state*

- The "Feel pict" questionnaire was developed to image the subjects' feelings about their skin. Seven skin "states" are proposed through pictures of landscapes, objects, animals but not humans, contrasting a positive and a negative version of the same concept: [burning versus pleasantly warm], [dry versus moisturized], [tingling versus soothed], [oily versus nourished], [polluted versus healthy], [loose versus firm], [wrinkled versus smooth]. In each situation, the subject is asked to position his or her current feeling about his or her skin between the 2 propositions, separated by 9 boxes. This positioning is then transformed into a scale ranging from 1 (top negative picture) to 10 (top positive picture). An overall increase in the score indicates an improvement in the subject's feelings about his or her skin. The overall score can vary from 7 to 70; a value above 35 indicates a rather positive state.



*Example of pictures for the [dry versus moisturized] state*

- *Validation of the psychometric tools*

Several studies are still in progress. In parallel to the evaluation of the acceptance and effectiveness of various cosmetic products, we are studying the emotional universes evoked by them thanks to the "Moodpict" and "Feelpict" questionnaires. A comparison between the "Moodpict" approach and standard verbal approaches (affect scales) will be made.

At the time of submission, only one study was completed and is described below.

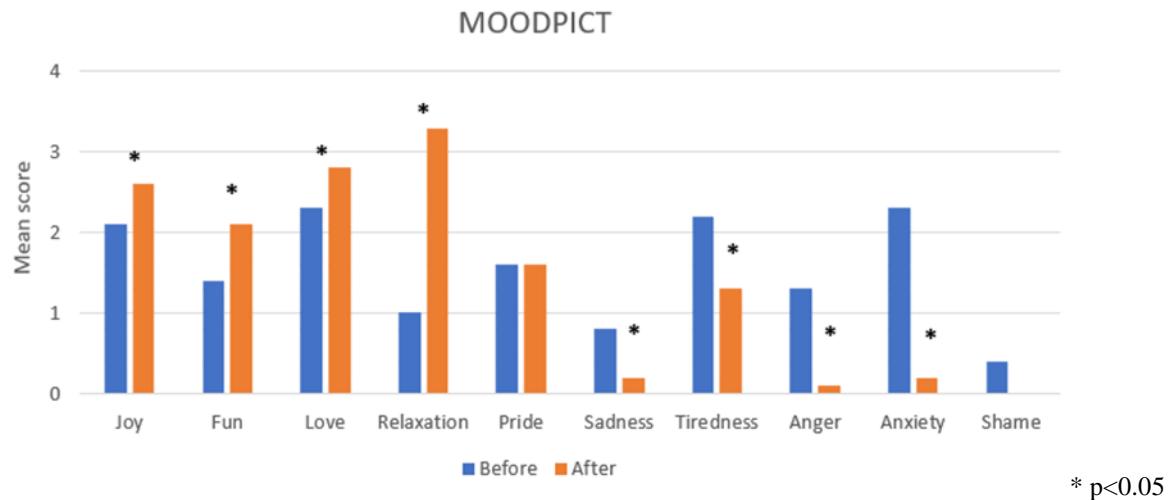
Sixteen randomized female subjects [26-54 years; mean age=39 years] participated in this study. The respondents differed widely in cosmetic usage habits. A facial treatment was performed for every subject by using a sequence of seven products: a cleansing milk, a scrub, a floral water, a hydrating mask, a serum, a day cream and an eye cream. The products were fine commercial cosmetics and the whole care lasted 30 minutes. It was performed in a cozy area with relaxing music and a scented candle. For research purposes, subjects were not informed that the final objective of the study was to test whether the sequence of products used could lead to changes in emotional state. The subjects answered the two questionnaires ("Moodpict" and "Feelpict") before and after the facial treatment.

A statistical analysis was carried out with the use of SAS (macro v0.3.3). Shapiro-Wilk test was performed to determine the normality of data. In addition, a paired t-test and/or a Wilcoxon test were performed.

## **Results.**

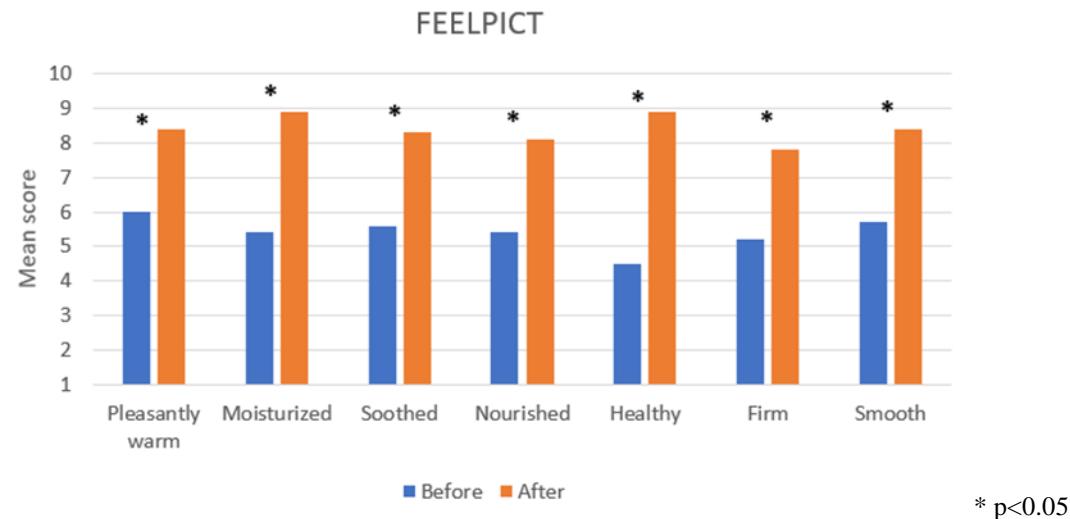
The project is under development and the full results will be presented at the conference in September 2022. The results of the completed study on facial care are presented below.

\_ "Moodpict" questionnaire: The average before/after scores for each emotional state are presented below.



Eight out of ten states improved significantly after the facial treatment; only the two states related to dominance [(pride, confidence) and (shame, vulnerability)] did not change. The two states most strongly impacted by the care were feelings of relaxation (+2.3 on average) and stress (-2.1 on average). The overall score increased significantly from 22.1 to 30.5 (p<0.05).

\_ “Feel pict” questionnaire: The average before/after scores for each emotional state are presented below.



All states improved significantly after the facial treatment. The two states most strongly impacted by the care were feelings of moisturization (+3.5 on average) and health (+4.4 on average). The overall score increased significantly from 37.7 to 64.5 ( $p<0.05$ ).

## **Discussion.**

Cosmetic products have a role to play in the health of individuals, as an instrument of well-being. In the years to come, brands in the Beauty sector will have to behave as Health and Wellness brands. This means developing products that provide both physical AND emotional benefits, while having their claims scientifically validated. Only those brands and products that establish a strong and privileged emotional connection with consumers will be the most successful.

The two questionnaires developed here have proven to be useful to assess the impact of cosmetic products on subjects' emotions in a simple and quick way. Before and after a facial treatment, the Moodpict questionnaire showed that the subjects' overall emotional state had significantly improved, both through an increase in positive feelings and a decrease in negative feelings. It is interesting to note that there is consistency between the two states most strongly impacted by the treatment, which are the strong decrease in stress and the great increase in the feeling of relaxation. Two states were not changed here: those related to feelings of dominance. This is understandable because this type of issue was not present here. Furthermore, no make-up was applied after the treatment, which could have had an influence on this feeling of self-confidence.

The Feelpict questionnaire showed that the subjects' feeling about their skin improved significantly. Feelings of hydration and health were particularly increased. The skincare routine included a step with the application of a mask rich in moisturizing active ingredients (hyaluronic acid, glycerin) and several steps of skin cleansing (make-up removal, exfoliation) which contribute to the impression of cleanliness.

Furthermore, the subjects found both questionnaires easy to complete and fun to use.

## **Conclusion**

Compared to verbal approaches to expressing emotions, the "Moodpict" and "Feelpict" approaches developed require a lower mental load. The processing of images at the brain level is faster than for words. This approach allows a privileged and direct access to emotions, while being objective, fast and easy to implement with the subjects.

This type of approach can help differentiate products that are equally appreciated thanks to the emotional universes evoked. The knowledge of the latter can, moreover, allow a better positioning on the market, by ensuring an adequacy with the marketing promises.

## **Acknowledgments.**

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## **Conflict of Interest Statement.**

The authors have disclosed no conflicts of interest.

## **References**

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