**OZGUR PROJECT**

**RESEARCH PROPOSAL**

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**Abstract**

There is a general underlying idea that smelling good is the key to being attractive. Previous studies claim that human beings are biologically wired to be attracted to things or people with a good smell and this could be why perfumes were invented. Both small as well as large scale studies have been conducted and researchers found that there indeed seems to be an association with nice smells and perceptions of physical attractiveness. However, a more precise version of the idea would be the effect of good or bad smells present in the environment on facial attractiveness, since the face is more readily evaluated on an everyday basis. Therefore, our aim is to conduct a psychology research with the following questions in mind: “Do olfactory cues present in the environment modulate facial attractiveness?” and “Do these olfactory cues aid in recognition of these facial stimuli at a later stage in connection with encoding specificity?”

**Introduction**

Our proposed study can be easily conducted on campus, the participants being students of the Sabanci University, both Turkish and International. The first stage of this study will be a replication of a previously conducted study by Demattè, Osterbauer and Spence (2007) on how perceived facial attractiveness is strongly affected by olfactory cues, with our study being on a relatively smaller scale than the original. There will also be an addition of the memory variable, to test whether memory is positively or negatively affected or even affected at all by olfactory cues in connection to the phenomenon of encoding specificity. The original study was only conducted on female participants whereas our study will take into account the inclusion of male participants as well. The odours, which will be used as the independent variable, will be different than the ones used in the original study. We will have different groups of people administered to different conditions (odours) hence, a between-subjects design rather than a within-subjects design (or repeated-measures) will be used.

The research includes a total of three main stages: the pre-experiment, main experiment - which is further sub divided into two phases (data-gathering stages) - and the evaluation of results.

**Method**

There will be a total of 40 healthy participants whose olfaction functioning is normal - 20 male and 20 female - along with a control group of 10 people which will include 5 males and 5 females. We are not “controlling” for ethnicity because we would test our hypothesis on whoever is willing to sign up. Anybody can participate in this study between the ages of 19-25. The recruitment of participants is completely random and by volunteering. The participants will be provided with a consent form which they will have to sign in order to proceed with the experiment. The consent form will include allergy warnings as some people may have problems with certain scents that would be used in the experiment but the true purpose of the study will not yet be revealed.

**Materials**: A pool of 40 faces (black and white pictures), 2 sets for each of the genders. The pictures are all faces of Caucasian males and females. In addition to this there will be a use of 6 odours in total - 3 good and 3 bad. Each scent is meant to be different than the other. The pictures will be rated using the Likert scale.

Once the materials have been collected, the first stage of the experiment can take place. This is the pre-experimental stage which includes the rating of the pool of 40 faces as well the 6 odours by the control group using a rating scale. According to the results of these ratings, we will choose the 20 most neutral faces for the actual experiment. This will be to ensure higher chances of the olfactory effect. The odours will be rated beforehand to ensure whether they really are categorized as good and bad smells by both males and females. This also rules out the phenomenon of halo dumping from taking place in the actual experiment. The time that each odour takes to spread in the experimental room will also be tested beforehand in order to control the intensity of each odour at the time of the actual experiment. 1 odour rated as unpleasant will be used for both genders in the experiment.

The second stage, which is the main experimental stage, can then take place. There will be two conditions that we will work with: in one condition, the room where the experiment will take place will be administered with the good odour before the participant walks in. In the second condition, the room will be administered with the bad odour. The task at hand would be to judge the attractiveness of the 20 faces that will be shown to them. They will be asked to rate the pictures on a scale of 1 to 9 (from least attractive to most attractive). The pictures will be shown on a computer screen for 3 seconds. In this way the data will be collected from all 40 participants.

The other half of the second stage of the experiment will test the memory of all the participants. They will be asked to return a day after they had participated and rated the faces, and there will be an incidental memory recall test with the help of olfactory cues. Each participant will be given Yemekhane vouchers to motivate them to come on this day for the second part of the experiment. During the memory task, the room will either be administered with the same odour (i.e. bad-bad or good-good) or the opposite odour that they were experimented under (i.e. bad-good or good-bad). The participants will be shown the 20 faces that they had previously seen, paired with another set of 20 unfamiliar faces and they will be asked to answer ‘yes’ or ‘no’ to whether they recognise them or not. This will test the encoding specificity. Participants will be briefed at the end of this stage.

The final stage of the experiment is the analysis of the data. We will make use of ANOVA and t-test for evaluating the data sets. We will use independent-samples t-tests for estimating the effect of odours on the perceived attractiveness of pictures. ANOVA will be used to compare the memory performance. In this way we will derive more quantitative data (i.e. not only the effect of olfactory cues on perceived attractiveness, but also olfactory-based encoding specificity), which will make the research more interesting.