

INVESTIGATION ON THE HEALTH RISK ASSOCIATED WITH THE USE OF COSMETIC PRODUCTS

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INTRODUCTION/ OBJECTIVE

Cosmetics have been used since the earliest civilizations. Today, more than ever, we cultivate our appearance, and almost everyone turns to beauty products. No one can resist the increasingly high-performance product ranges that cosmetics laboratories are working hard to develop. Many cosmetics contain chemical components that raise questions and even controversy. The chemicals used in cosmetics have a number of negative effects on consumers due to their excessive use, the risk of which is increasing day by day. The harmful chemicals present in cosmetics, such as parabens, phthalates, aluminum salts, etc., are carcinogenic when they penetrate the body.

This subject has not yet been widely discussed in Algeria, and the Algerian population is still unaware of the toxicity and harmful effects caused by the use of cosmetic products. For this reason, we thought it would be interesting to carry out a study of the health risks to which people using these products are exposed. The aim of our study is to reveal the extent of the use of cosmetic products by our population and the occurrence of undesirable effects following this use.

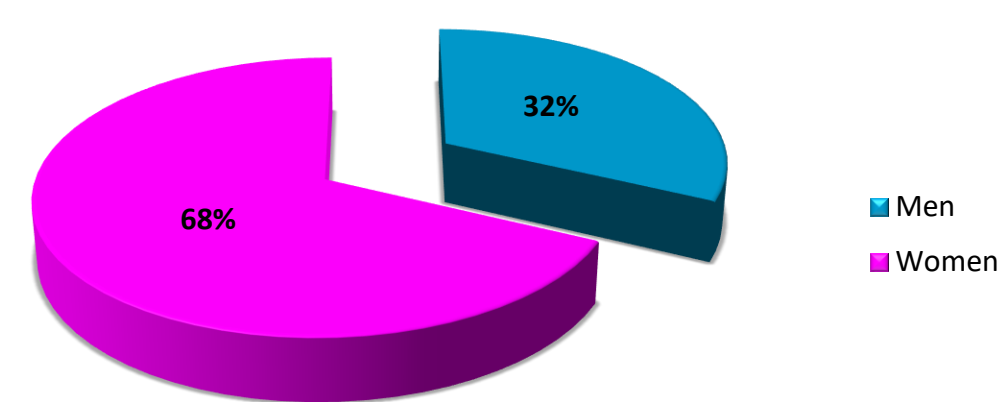
MATERIAL AND METHODES

This is a descriptive cross-sectional study of the general population of the city of Tlemcen and its communes and the commune of Mecheria in the wilaya of Naàma, west of Algeria, conducted from October 2019 to March 2020. This study was carried out on a random sample of the general population who were questioned about the use of cosmetic products.

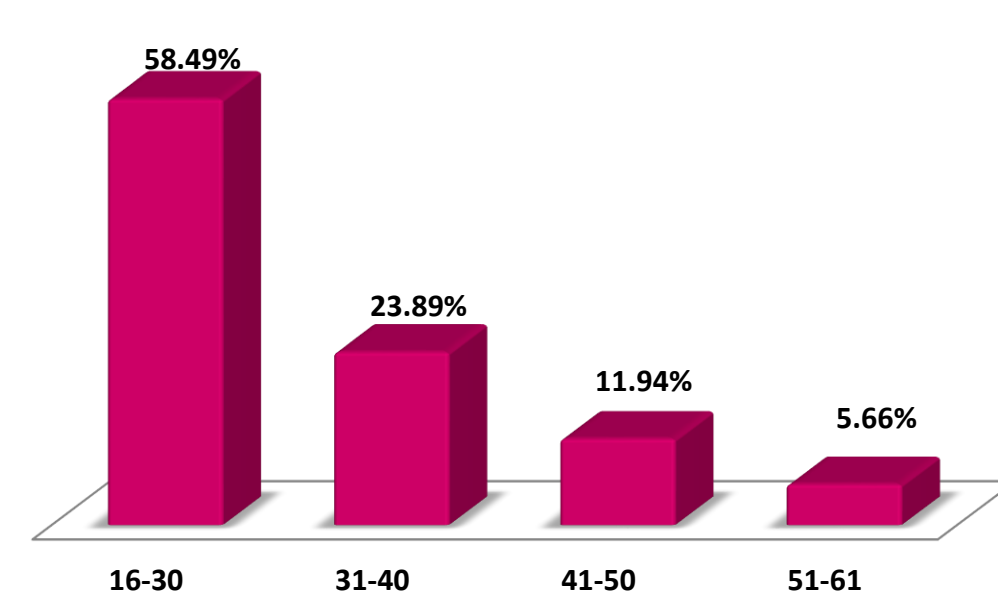
The information was collected using a questionnaire prepared in advance by the interviewers and completed by the participants.

RESULTS AND DISCUSSION

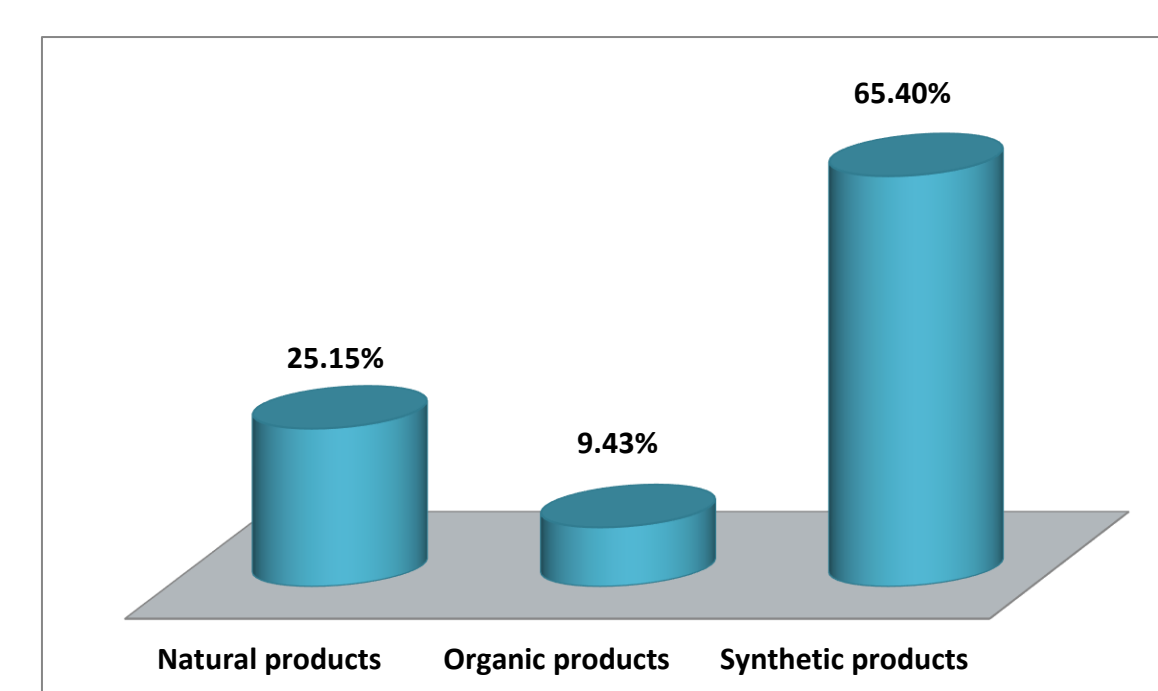
A total of 159 people from the general population of the city of Tlemcen and its communes (Meghnia, Sebdou, Ghazaouet and Remchi) and the commune of Mecheria in the wilaya of Naàma Algeria were questioned about their use of cosmetic products.



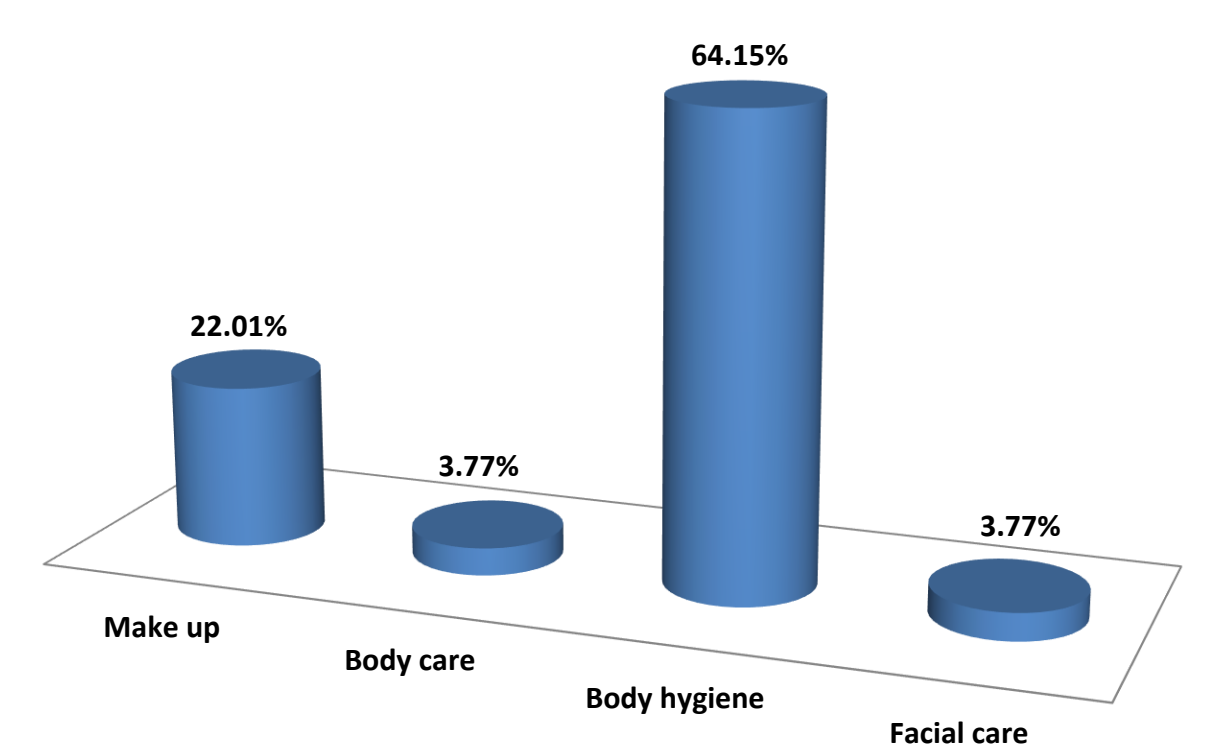
Distribution of the population by sex



Distribution of the population by age



Distribution by category of cosmetic product most commonly used

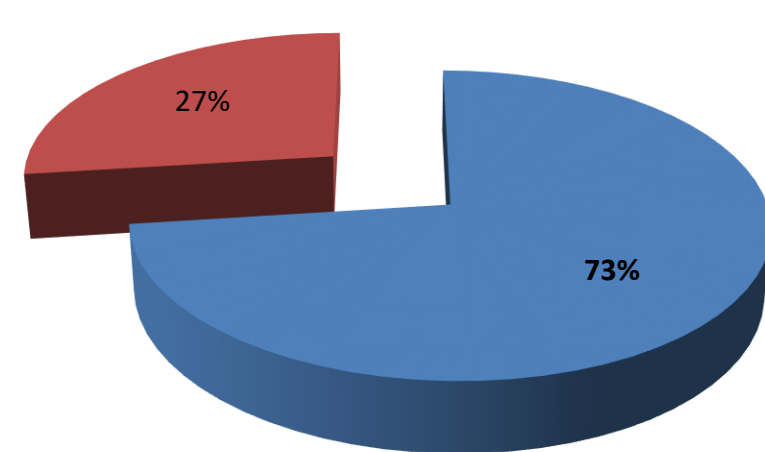


Distribution of the most commonly used cosmetic products

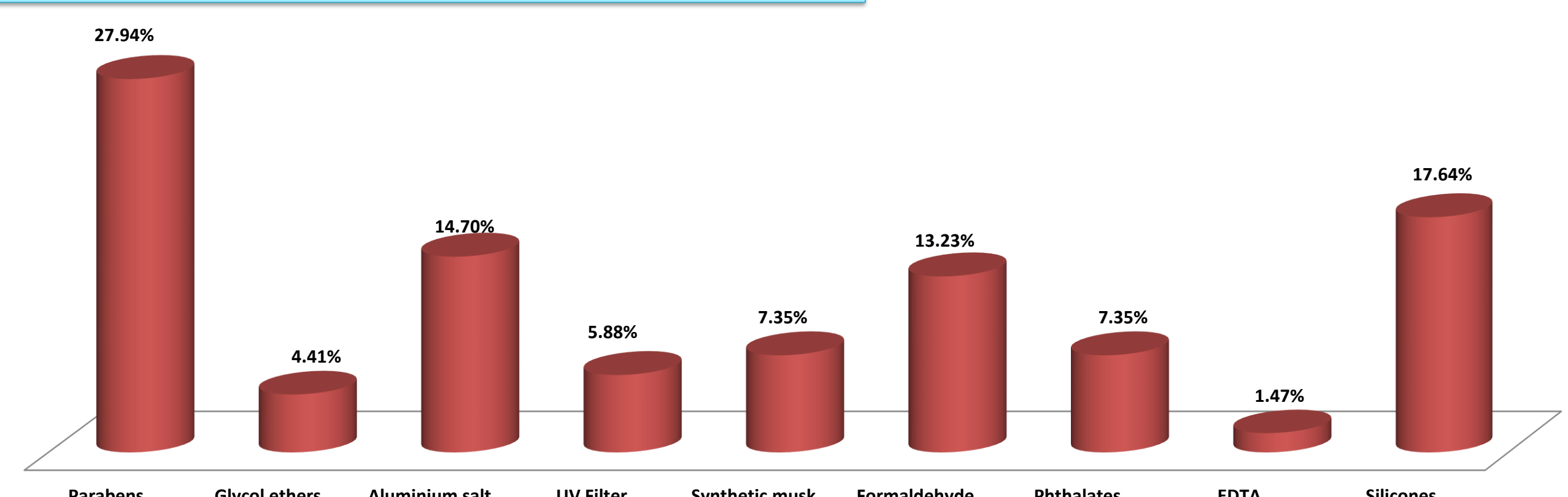
Of the 159 people questioned, 68% were women and 32% men. The most common age group was 16 to 30 (58.49%), and the least common was 51 to 61 (5.66%). The average age was 30.42 ±10.50 years, with extremes ranging from 16 to 61 years. This proves that young people tend to want to improve their appearance more than older people.

65% of our population used synthetic products and 25% used natural products, whereas organic products were only used by a minority of 9% of the population. This was justified by the unavailability of organic products and their very high price, whereas synthetic products are cheaper and more available.

Body hygiene products were the most widely used in our study, accounting for 64% of the total, followed by make-up products (22%),



Distribution of the population according to their knowledge of the composition of cosmetic products

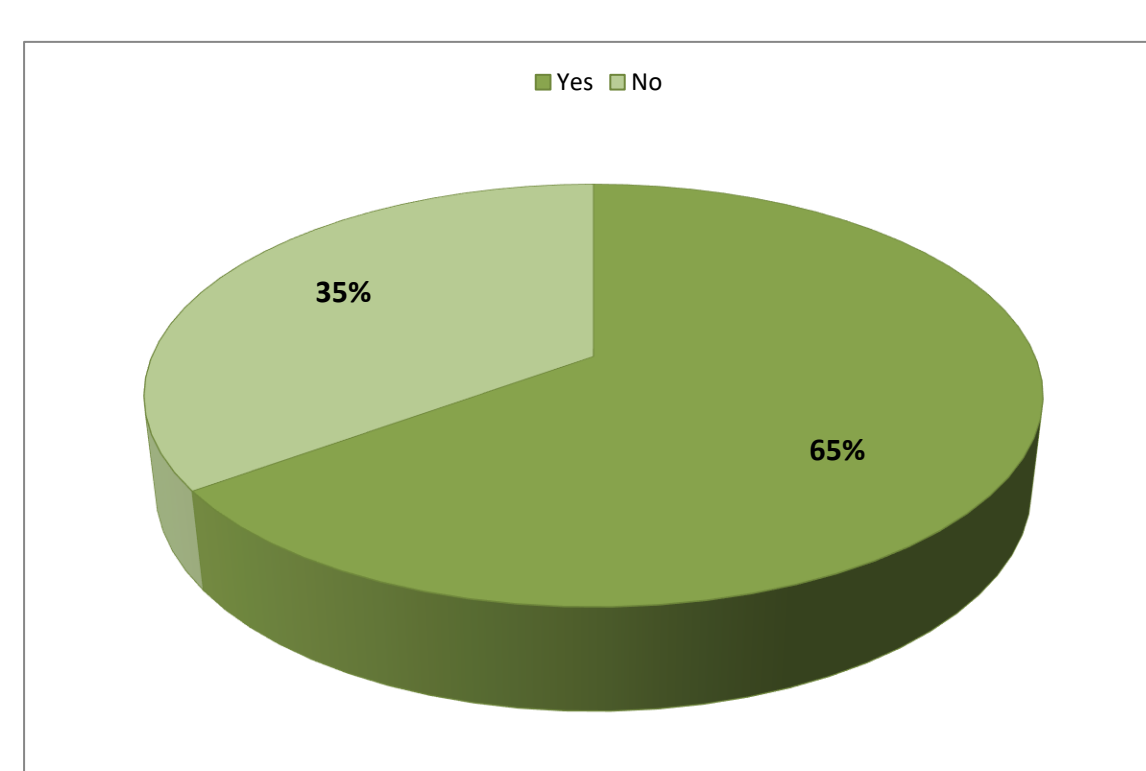


Distribution of the various chemical constituents contained in cosmetic products

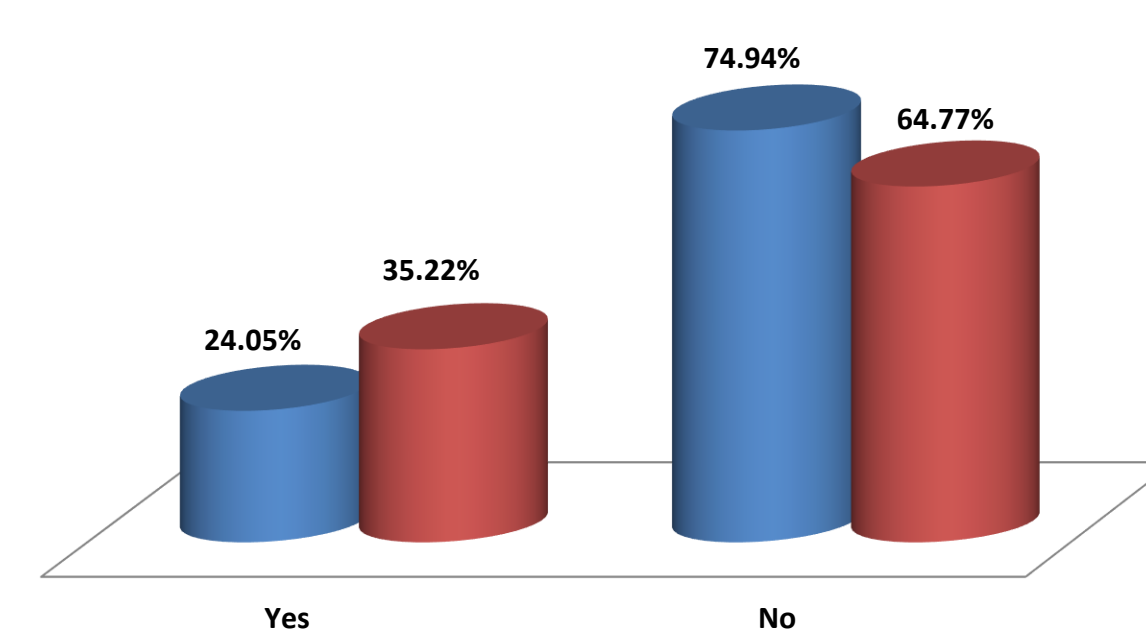
Parabens (27,94%), silicones (17,64%) aluminium salts (14,70%) and formaldehyde (13,23%) were the constituents most familiar to our population. Those who had some knowledge of these constituents were mainly students or workers in the health sector. We noted that some individuals in our population with scientific knowledge could not be aware of these constituents, a remark similar to that found in the survey carried out by the Canadian David Suzuki Foundation in which the results indicated that even informed consumers could not be aware of the toxic chemicals contained in their cosmetic products.

73% of our population had no knowledge of the constituents of cosmetic products.

Women were more familiar with the constituents of cosmetics than men (35 women answered yes to the question about knowledge of constituents, whereas only 8 men answered yes to the same question, with a p = 0.02). This explains why women are greater consumers of cosmetic products than men and have more experience and are more interested in the constituents of the products they use.



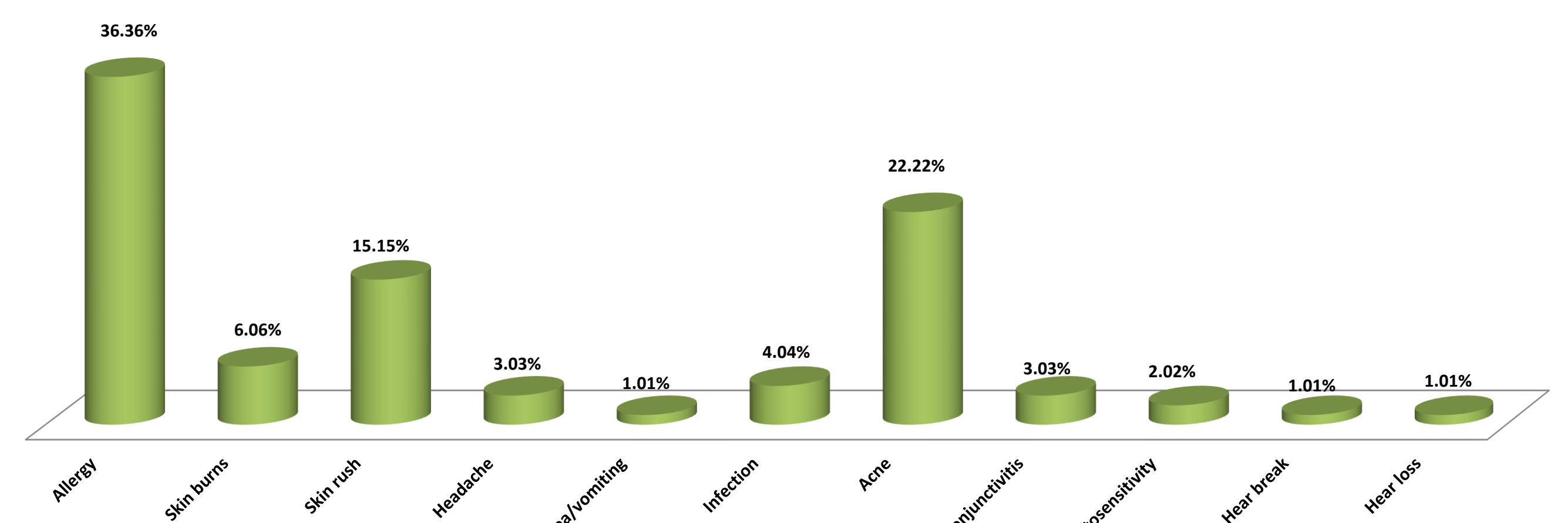
Distribution of the population according to the development of undesirable effects following the use of cosmetic products



Distribution of the population according to their knowledge of the carcinogenicity and endocrine disrupting effect of the constituents of cosmetic products

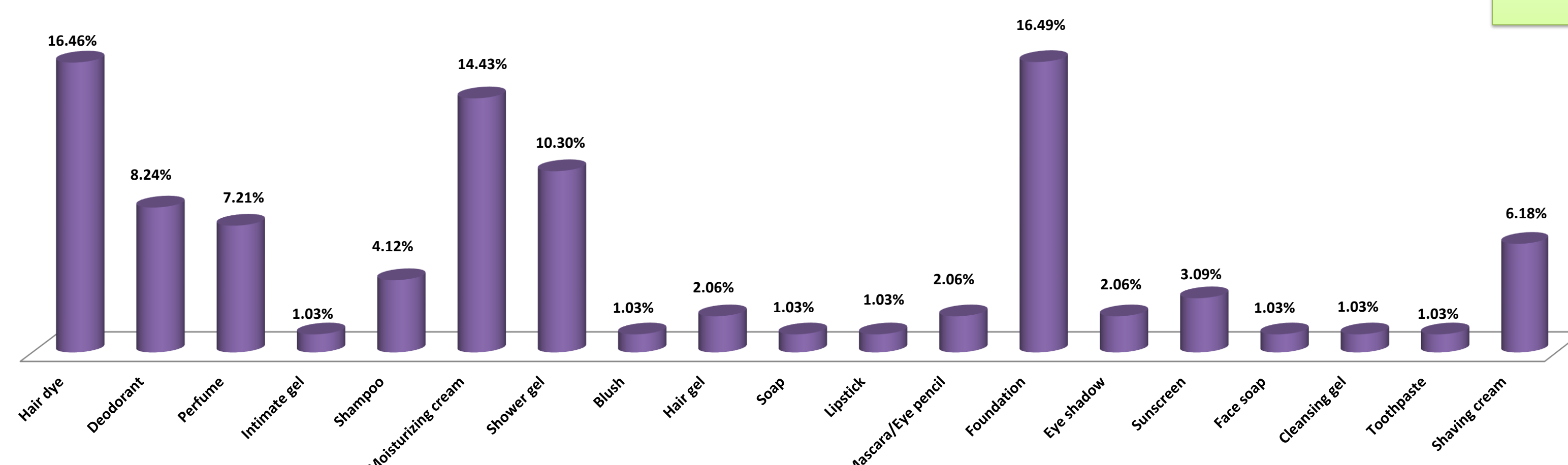
65% of our population have already developed undesirable effects following the use of cosmetic products.

The majority of the population surveyed were unaware that the constituents of cosmetic products are carcinogenic and endocrine disrupters, with frequencies of 64.77% and 75.94% respectively.



Distribution of the population by type of undesirable effects following the use of these cosmetic products

Allergy was the most common adverse reaction to the use of these cosmetic products (36.36%), followed by acne (22.22%), skin rash (15.15%) and skin burns (6.06%). Similarly, the majority of declarations of adverse reactions following the use of cosmetic products to the French Health Products Safety Agency (Afsaps) concerned allergic reactions.



Distribution of cosmetic products implicated in the occurrence of adverse reactions

The cosmetic products with the highest incidence of undesirable effects were hair dye (16.50%), followed by foundation (16.49%), moisturiser (14.43%) and shower gel (10.30%). For make-up products, eyeshadow was the most frequently reported, with mascara and eye pencil accounting for similar percentages (2%).

CONCLUSION

Overuse of products by consumers can cause major health problems, which is why people need to be more careful about the products they consume.