



CROSS-SECTIONAL STUDY ON IMPACT AND EFFECT OF COSMETICS UPON FEMALE MEDICAL STUDENTS

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ABSTRACT

Background: The cosmetic market is booming all over the world with 25% annual growth in every year. By the year 2025, it is expected that the turn over from the industry will cross 20 billion dollars. After beauty contests that are conducted from various levels and after IT boom in India, the demand and urge for cosmetics has increased among the youngsters. In this context, we have planned to conduct a study on Impact and Effect of cosmetics upon female medical students. **Objectives:** 1. To assess the various cosmetics used for skin, hair and nail either daily or periodically. 2. To assess the effect of cosmetics on skin. **Methods:** Study population: Female medical students from 2nd year to CRMI were taken on comparing the usability of cosmetics. Sample size: Twenty-five students from each batches were included. Sampling procedures: A questionnaire on cosmetics usage was issued and the responses were collected. A examination of the skin, hair and nail was done at the end along with skin moisture content analysis. Analysis plan: Univariate analysis. **Results:** Acne and scarring noticed among 42 students, atopic dermatitis, xerosis and ichthyosis among 22 students. Their cleansers were not addressed properly. Seborrhoeic dermatitis noticed among 8 students and brittle hair/dry scalp among 9 students whose hair cleansers, oil application practices and hair conditioning techniques were rectified. **Conclusion:** In this study, we identified that medical students are also not exceptional for getting obsessed with online marketing, peer influence and irrational cosmetic usage. The adequate knowledge on cosmetics lack in many of our students. This grey area has to be addressed properly among medical students while teaching them.

KEYWORDS :**BACKGROUND AND JUSTIFICATION**

Cosmetics are natural or synthetic products which are applied to the skin for the primary purpose of aesthetic enhancement. [1] Cosmetics are used to cleanse, perfume, protect and change the appearance of our bodies or to alter its odour. [2] The cosmetics play a large role in self-identity, personal satisfaction, stress relief and superficial satisfaction.

In contrast, products that claim to modify a bodily process or prevent, diagnose, cure or alleviate any disease, ailment or defect are called therapeutics. This distinction means that shampoos and deodorants are placed in the cosmetics category, whilst antidandruff shampoos and antiperspirants are considered to be therapeutics. [3]

OBJECTIVE

1. To find out the various cosmetics used for skin, hair and nail either as daily routines or periodically.
2. To assess the effect of cosmetics on skin.

METHODS**Study Population**

As females are using much more cosmetics than males, female medical students from 2nd year to CRMI had been taken for the study. Institutional Ethical committee is approved on 06.02.2023.

Operational Definitions**Inclusion Criteria**

- Female medical students from year II to CRMI.
- Those who are willing to participate in the study.

Exclusion Criteria

- Male medical students
- Female students who are not willing to participate in the study.
- Sampling procedures
- Twenty five students from four batches from 2nd year to CRMI had been included in our study.

Sample Size

Totally, 100 female medical students had been included in our study.

Data Collection

A questionnaire which included various cosmetics used from head to toe in objective pattern was issued to the participants. The responses from the participants were collected. A detailed examination of the skin, hair and nail along with moisture content analysis was done at the time of submission of response sheet.

Analysis plan**Univariate analysis plan.****RESULTS**

The obtained results are discussed below.

Among the 44 conditioner users, 5 used under ad influence, 9 used following peer influence, 28 used it as it was difficult and only 2 used under doctor's advice for frizzy hair management.

We wanted to analyse whether they are using same product or special product for face cleansing. For skin rejuvenation of face, 10 used organic herbal products, 12 used alpha hydroxyl acids on their own under peer influence weekly once for 10 minutes contact period. 4 used facial serum obtained from net marketing and 3 regularly underwent bleaching and facial in beauty parlours. We did a complete dermatological examination along with skin moisture analysis for all the participants. We tested the skin moisture content over face and all four extremities with the help of the moisture meter.

The values are plotted as per the index as

- <33% - Very dry
- 34-37% - Dry
- 38-42% - Normal
- 43-46% - Ideally moist skin

Nail examination showed pitting in 2 participants and onychotillomania in 1 participant.

DISCUSSION

Regarding hair care practices, participants used shampoos on random selection giving priority to marketing, peer influence and fragrance. 13 of them used natural herbal shikakai powder and 6 used herbal shampoos. Chemical shampoos contain 10– 30 ingredients. The study by Rummi Devi Saini et al.[5] suggested that herbal shampoos are better compared to their chemical parts in maintaining the acid mantle of scalp, pH of scalp, and reduce the hair loss.

Regarding hair washing frequency, 24 washed their hair once in a week. A study by Supriya Punvani et al.[6] showed that increased hair wash frequency is beneficial to technically assessed hair quality.

64 of our participants used antidandruff shampoos either routinely or on and off basis. Only 9 of them used on medicated grounds with doctor's prescription. The study by Sravanth et al.[7] showed that synthetic shampoos can lead onto dry, brittle hair.

Article on oil application by Venkataram Mysore stated that oil application has anti-inflammatory, antioxidant, UV damage protection, antibacterial property and moisturizing property .[8] However, young students deny oil application for the fear of cosmetic appeal: 16 applied daily, 46 before taking hair wash, while 36 very rarely and 2 never applied oil in our study.

Regarding hair conditioning products, 39 of our participants used wash off products and 5 used leave on products. As per the article by Maria Fernanda Reis, the conditioners neutralize the electrical negative charges of the hair fibre, lubricate, prevents entangling of hair, seal the cuticle and increases the shine, smoothness of hair. However, conditioners should not be applied over the scalp surface and wash off products to be washed off thoroughly. Those who have straight hair should use wash off products rather than leave on products which impart an oily look. Curly hair persons can prefer leave on products for persistent effects. In our study, the skin cleansing products, frequency, hair cleansing products and hair care practices have direct correlation with their moisture content, oiliness of skin which in turn lead to dry, brittle hair, Seborrheic dermatitis, dandruff, acne vulgaris and dryness of skin. Certain cosmetics and parlour procedures have direct correlation with melanoderma of facial skin. Menstrual irregularities and hormonal derangements have huge impact with female pattern hair loss, thinning of hair and hirsutism. The causative factors have to be addressed properly, and life style modification advice was given to them at the time of consultation.

LIMITATIONS

We only engaged female medical students in our study as the chances of cosmetics usage is considered to be high among female students.

We only engaged Government medical college in a tier-3 city. The cultural and social impact of the people who come for outpatient clinic for consultation is having the impact on the treating doctor's make over. Hence, compared to Tier-1 and Tier-2 cities, our medicos used less number of cosmetics.

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