

## RESEARCH ARTICLE

# Assessment and Evaluation of Cosmetics Preparations in Teenage Girls For Acne

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## ABSTRACT

**Introduction:** The Indian cosmetics industry plays a vital role in ayurvedic and herbal cosmetics sector because India is traditionally strong in this field. Acne is a common skin disorder for which dermatologists come across since the last decade. Throughout the Indian market, different proprietary cosmetic formulations are available for the treatment of acne. Among the whole range of products that fall within the region of the Indian cosmetic market, the most popular items are color cosmetics, of which Fair & Lovely, Clean&Care, Vicco Turmeric & Ponds glosses account for the most sales. Lakme and Revlon are the most popular brand in the local market. The present study was to evaluate the uses of cosmetic preparation in teenagers Girl for Acne.

**Material and Methods:** This was a concurrent observational-based study conducted by different pharmacy colleges in Greater Noida. The study was carried out in March 2018 to May 2018. During the study period total of 200 Acne Patient Girls were evaluated.

**Results & Discussion:** The present study has made an earnest attempt to examine the cosmetics usage behavior of College girls. The scope of the study, however, has been limited to age particular arts and science colleges in which co-education is in vogue. The prevalence of acne was most common in the age group between 19-22 years. Among the participated teenagers, girls were the most commonly used product was Herbal, followed by allopathic. The total average cost of the cosmetic product used by the girls in the prescription was found to be 112.23 rupees.

**Keywords:** Ayurvedic, Concurrent, Cosmetics, Herbal, Prevalence

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## INTRODUCTION

Now day Cosmetics has become an unavoidable part of every woman's life. The word "cosmetics" is derived from the Greek word Kosmetikos which means to adorn. Cosmetics are also colloquially known as makeup or personal care products, which are used to enhance the appearance or odor of the human body. They are generally mixtures of chemical compounds, with some derived from natural sources and some synthetic.<sup>1</sup>

Acne vulgaris is the most common skin condition seen by the dermatologists, which occurs most commonly during adolescence, affecting an estimated 80-90% of teenagers. Medications for acne include benzoyl peroxide, antibiotics (either topical or by pill), retinoids, anti-seborrheic medications, anti-androgen medications, hormonal treatments, salicylic acid, alpha hydroxy acid, azelaic acid, nicotinamide, and keratolytic soaps. Early and aggressive treatment is advocated by some to lessen the overall long-term impact on individuals.<sup>2</sup>

Acne is a treatable disease, but the treatment usually lasts for many years, and it may influence many aspects of a patient's life. In the majority of the cases, the patient's adherence to treatment is directly dependent on the cost of treatment, and compliance with the treatment regimen is an essential element in the overall effectiveness of therapy.

In the Indian market, drugs of various brands are available for the treatment of acne vulgaris. This creates a lot of confusion for the physician to decide the brand of choice for their patients. A literature search revealed very few studies that compared the cost of drugs of different brands for acne vulgaris.<sup>3-5</sup>

The evaluation pattern provides us insight into the rationality of prescribing. Irrationality used in cosmetic preparation may be a harmful effect on the skin; therefore this is the primary reason for the complications of the skin disorder. To promote rationality-methods for adherence improvement, minimizing the errors, complete history taking, assessing the comorbid conditions are the important tools.

Therefore our present concurrent study aims to develop the significance and rationality of cosmetic preparation in preventing the complications and promoting the public health and also to estimate the cost

difference between various brands of drugs available for the treatment of acne.

**METHODOLOGY**

The present concurrent study was duly approved by the Institutional Review Board, dated 08<sup>th</sup> February 2019. It was an open, non-comparative, 3-month study, March to May 2019, conducted at different Pharmacy colleges in G. Noida. Suitably qualified and competent professionals were involved in conducting the study. The participant was selected based on Inclusion and exclusion criteria. The Inclusion criteria were; only College girls were involved, Girls with the age of 18-25 years were included in the study, and Exclusion criteria were Girls below 17 years and above 25-year women were excluded, mentally retarded, unable to comply and to refuse the consent Girls. The data were collected from a sample size of 202 adolescent females (12-19) from different regions of Greater Noida. Adolescent females were chosen for this study because females are the primary users of cosmetics preparation for acne.<sup>6</sup>

The participated girls signed informed Consent. The data was obtained by individual interviews using the proformas for; informed Consent, Structured Questionnaire, as per the World health organization guidelines.<sup>7</sup>

**Statistical Analysis**

Results were expressed in percentage or frequencies. The cost difference in the maximum and minimum price of the formulation was calculated.

**RESULTS AND DISCUSSION**

This was an observational concurrent survey-based study in which almost 202 teenagers' girls were included during the period of three months (March, 2018 to May 2018). Among 202, the maximum number of Acne patients fell under the age group of 19-22, followed by 15-18 and 22-25 years (Table 1). As shown in (Table1), in the present study, the majority of patients belong to 19-22 years of age group (%) followed by 15-18 years age group, which

**Table 1: Age Distribution Among Teenagers Girl With Acne**

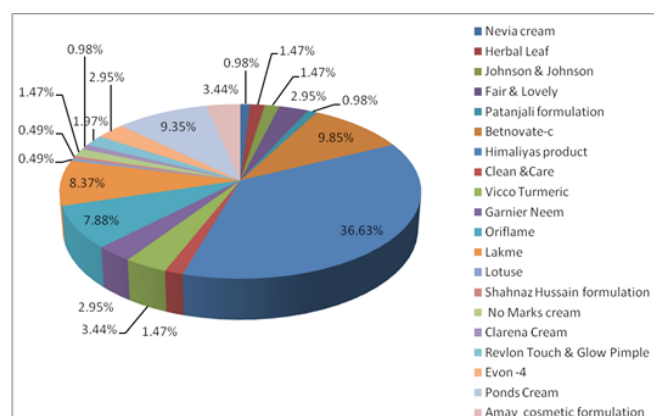
Age Group	No of patients	Percentage
15-18	68	33%
19-22	125	61 %
23-25	9	4.4 %

**Table 2: Sources Of Self Medications**

Source of self-medication	No of participant	Percentage
Friends	72	31
Relatives	55	27
Medical storekeeper	32	16
Beauticians	22	11
TV/Print media	10	5
Other	20	10

is comparable with a study where the majority of patients were from 15-25 years age group is more affected as per literature survey.<sup>8</sup> In the present study, patients had a mean age of 20, which is comparable to study where mean age was 22.79, 8 also study where mean age was 21.67.9 Above studies including present study observed higher number of younger age girls affected with acne.

Increasing incidence of self-medication has been documented throughout the world by large population-based studies and national health surveys.<sup>10-11</sup> We have very little data, if at all, to document this trend in our population. This study was an attempt to throw some light on this problem in our setup. The results have shown an alarmingly high incidence of self-medication in patients with acne vulgaris, i.e., 77%. This is much higher than 9.2%, reported in a similar study on acne patients in Germany. Among 202 participants with acne 123 (60.8%) were used herbal cosmetic formulation followed by 79 (39.1%) allopathic formulation. The sources of information about medication for patients using self-medication were friends (31%), relatives (27%), medical storekeepers (16%), beauticians (11%), and TV/print media (5%). Colleagues, neighbors, quacks, and others were the source of information in case of 10% of participants with acne (Table 2). The current study reflects that the uses of Himalayas formulation 74 (36.63%) was maximum in number followed by Allopathic cream (Betnovate-C), 20 (9.85%) & Lakme 17(8.37%) (Figure 1). Among the herbal formulation, Himalaya's formulation was found to be maximum beneficial for clearing, smoothing & removing oil from the skin.(Table no-3). The total average cost of the cosmetic product used by the girls in the prescription was found to be 112.23 rupees. The average cost of herbal cosmetic



**Figure 1: Formulation Used By Participant With Acne**

**Table 3: Beneficial Effects Shown By The Herbal Product:**

Effect Shown	No Of Participants	Percentage
Clear skin	31	25.61%
Smoothen the skin	28	22.16%
Remove Oiliness From The Skin	20	16.25%
All of the Above	44	35.77%

product was found to be 120.69 rupees. The average cost of the allopathic product was found to be 98.91 rupees.

## CONCLUSION

The present study showed that the majority of participants affected with acne belong to the 19-22 years, age group. The results have shown an alarmingly high incidence of self-medication in patients with acne. The sources of information about self-medication for teenager's girls maximum from friends. Among 202, maximum participants with acne were used herbal cosmetic formulation. The current study reflects that the uses of Himalaya's formulation were maximum. Himalaya's formulation was found to be maximum beneficial for clearing, smoothing & removing oil from the skin. The total average cost of the cosmetic product used by the girls in the survey was found to be 112.23 rupees. This study can help to provide feedback to the prescribers, thereby increasing awareness and improve patient care by rational utilization of cosmetic formulation in treating acne.

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