

Informed Self Medication is the Need of the Hour: A Situation Analysis of Practice of Self Medication for Dermatological Conditions and Attitudes towards it among University Students in North Chennai: A Cross Sectional Study

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Abstract:

Background: Self-medication, defined by the World Health Organization (WHO) as the use of prescription drugs without medical guidance, is a common and concerning public health issue, especially among university students. Most of the over the counter (OTC) medications taken without due consultation but through other sources may lead to unwanted side effects and inadequate treatment of the problem. This study aimed to assess the prevalence, patterns, and determinants of self-medication for skin problems among students in an engineering college in Chennai, India.

Methods: A cross-sectional analytical study was conducted at a university in Chennai. A pre-tested, semi-structured questionnaire was administered, collecting information on demographic characteristics, medication usage, disease types, reasons for not seeking professional help, and sources of medication advice.

Results: The study revealed that 59.93% of study participants were engaged in self-medication, predominantly for hair and skin conditions. Hair fall (73.09%) and dandruff (55.14%) were the most common issues addressed through self-medication. Students chose self-medication primarily because they perceived their illness as minor (26.67%) or had prior experience with the condition (20.37%). Most of the students view self-medication as a part of self-care and believe that it should be practised (89.81). There was a statistically significant association between this attitude towards self-medication and the actual practice of self-medication. (CI 95% 1.000-4.834, OR 2.199)

Conclusion: This study emphasised the need for awareness among the non-medical university students about the potential risks associated with self-medication, including adverse effects and the importance of seeking professional medical advice for dermatological conditions. The study showed that most students endorse the practice of self-medication. Nevertheless, all medications, including over-the-counter (OTC) drugs, are associated with their own set of consequences. This emphasises the urgent need for education on the potential risks associated with it.

Keywords: Self-Medication, University Students, Dermatological Conditions, Prevalence.

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Introduction

Self-medication is outlined by the World Health Organisation (WHO) as the selection and usage of prescription drugs without medical prescription, in order to treat diseases or promote symptomatic relief [1].

Self-medication is a common part of self-care and overall health maintenance, and in numerous

situations, it is an appropriate approach to managing one's health. Various countries acknowledge over-the-counter (OTC) medicines as a distinct class of drugs and have implemented regulations governing their usage.

However, in India, there are currently no guidelines in place for the licensing of OTC medicines [2].

Common motivations for self-medication include reusing previous prescriptions, sharing medications from household stocks with family and friends, and relying on advice from sales personnel in retail establishments. Generally, drugs intended for over-the-counter (OTC) use have been proven effective and safe. However, patients often lack proper knowledge regarding the correct dosage, potential side effects, recommended duration of use, and potential drug interactions [3].

Whether drugs are used through self-medication or prescription, the literature indicates a high prevalence of irrational use, with over 50% of medications being misused [4]. With the advent of the Information Age, the practice of self-medication is on the rise in both urban and rural areas. According to a descriptive cross-sectional survey conducted in Karnataka involving 220 individuals an estimated 78.6% of Indians engage in self-medication. The reasons cited include a lack of time, rising consultation costs, and usage of the internet [2].

Self-medication poses a risk of potentially dangerous interactions between medications, as well as interactions with food and tonic supplements that patients may not be aware of. Combination products that contain undisclosed classes of drugs, as well as questionable food supplements or tonics, are a frequent cause of adverse drug reactions in clinical practice [5].

Dermatological issues are a leading reason for self-medication worldwide. It was found that 49% of patients seeking specialised care in dermatology departments were between the ages of 20 and 49.

The most commonly observed pathologies were acne, superficial mycoses (fungal infections of the skin), and pigmentation disorders [6]. Another study revealed that oral and topical steroids (35.42%) were the most commonly misused drugs, followed by antifungals (31.25%) [7]. Dermatological conditions are often underestimated by patients, leading to a high prevalence of self-medication in this area. Typically, topical medications are widely used without much knowledge about drug resistance or the underlying cause of the condition.

While adequate research already exists regarding the self-medication practices among medical and nursing students due to their proximity to healthcare settings, research on usage patterns among non-medical students is inadequate. This demographic also lacks basic knowledge of the OTC drugs needed to prevent misuse.

Unfortunately, this behaviour has been increasingly alarming in recent years [6]. Therefore, the objective of the present study is to find out the proportion of students who use OTC drugs for skin

conditions and assess determinants and patterns surrounding OTC use. While there is an attitude change in the general population where people are more keen to take personal responsibility for their health status, informed self-medication as part of self-care must be encouraged while at the same time in no means should it discourage the individual from seeking advice from a physician.

Materials and Methods

A cross-sectional analytical study was done to analyse the pattern and practices of self-medication among university students in Chennai during the period July -August

2023. This study used a questionnaire as the primary tool for data collection. The study obtained the approval of the Institutional Ethics Committee before its commencement. All the participants were clearly explained about the study and its objectives. They were also briefed about the procedure by which the questionnaire was to be filled. A written informed consent was obtained from all the participants before being enrolled in the study.

Study population: The study population consisted of individuals of both genders who were aged 18 years and above and were enrolled in an engineering college in Chennai. All the students who did not consent to participate in the study were excluded.

Study tool and sampling: In a previous study- the prevalence of self-medication for skin diseases was reported as 65.7% [8]. Using this prevalence, the sample size (n) was calculated to be 344. Participant selection was systematically conducted by simple random sampling.

The names of students in each of the 3 departments were recorded on a numbered list. A random number generator was employed to choose 344 entries. The students were given an information sheet and a copy of the questionnaire. Questionnaires were self-administered to 344 students out of which a 15% non-response rate was observed, which resulted in a final sample size of 292 participants.

Data analysis: Information about the usage of medicine, source of information, reasons for not seeking professional help, type of infection and drug use were collected along with demographic details of the person. The entire data was reported as a percentage and entered in MS Excel worksheets. The final data was then analysed in SPSS software. The Chi-square test was used to test the significance of the association between self-medication and its determinant.

Results

Out of a total of 292 participants, 247(84.7%) participants were male and 45(15.3%) participants

were females. Most of the students (63.36%) were between the age group 18 and 20. 192 (65.75%) students were from the mechanical course, 54(18.49%) students were from the electronics course and 46(15.75%) students were from the automation course. Of the 292 subjects in the study,

hair conditions were prevalent in 258 (88.36%) students. Skin conditions were prevalent in 201 (68.36%) students and 66 (22.60%) students suffered from nail conditions. The prevalence of self-medication among the study participants was (59.93%) 175 participants (Table 1)

Table 1: Prevalence of Dermatological conditions among the study participants

Dermatological condition	n	Prevalence
Hair condition	258	88.36%
Skin condition	201	68.36%
Nail condition	66	22.60%

Table 2: Prevalence of individual Dermatological conditions among the study participants

Hair Condition	n	%
Hair fall	201	68.84%
Dandruff	161	55.14%
Itch	40	13.70%
Split ends	37	12.67%
Baldness	32	10.96%
Greying	28	9.59%
None	17	5.82%
Lice	12	4.11%
Ring-like lesions	7	2.40%
Skin Condition	N	%
Acne	106	36.30%
None	70	23.97%
Darkening	69	23.63%
Dry skin	52	17.81%
Allergic rash	45	15.41%
Reduced colour	42	14.38%
Itching	35	11.99%
Insect bite	16	5.48%
Ring-like lesions	15	5.14%
Cracked skin	9	3.08%
Boil	7	2.40%
Scaling of skin	6	2.05%
Ulcer	5	1.71%
Nail Condition	N	%
None	209	71.58%
Nail becomes overgrown and thick	27	9.25%
Crumbling of nails	17	5.82%
Change in colour of nails	15	5.14%
Nail separated from the nail bed	11	3.77%

As shown in Table 2, the most common hair conditions for which self-medication was practised were hair fall (68.84%) and dandruff (55.14%) and the most common skin conditions for which self-medication was practised were acne (36.30%) and darkening of skin (23.63%). The nail conditions for which students self-medicated were varied.

Table 3: Type of drug used for Self-Medication

Hair- Type of Drug Used During Self-medication	N	%
Shampoo	94	64.38%
Ointment/Lotion/Cream	28	19.17%
Traditional Ayurvedic medications	19	13.06%
Oral (tablets/capsules/lozenges)	11	7.53%
Skin- Type of Drug Used During Self-medication	N	%
Ointment/lotion/cream	70	83.71%

Oral (tablets/capsules/lozenges)	16	18.60%
Traditional Ayurvedic Medication	8	9.30%
Nail- Type of Drug Used During Self-medication	N	%
Ointment/Lotion/Cream	26	86.88%
Oral (Capsules/Tablets/Lozenges)	6	23.75%
Traditional Ayurvedic Medication	2	11.25%

Points scored

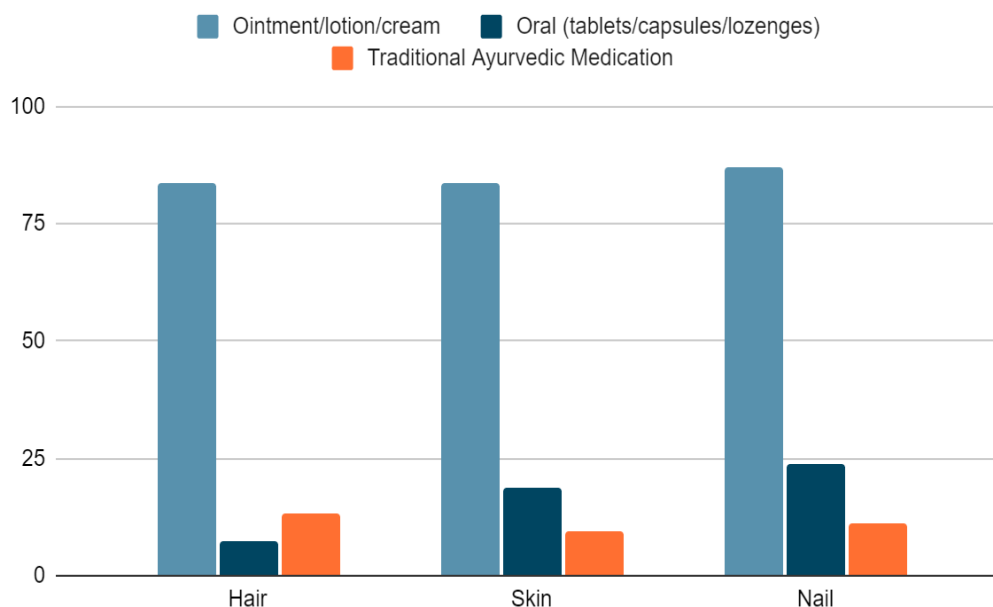


Figure 1: Points scored

The most commonly self-medicated form of the drug for hair conditions was shampoo (64.38%) as indicated by Table 3. The most commonly self-medicated form of drug for skin conditions were ointment/lotion/cream (83.71%). The most commonly self-medicated form of drug for nail conditions were ointment/lotion/cream (86.88%). The most common method of procuring the medication for hair conditions (37.67%), skin conditions (40.69%) and nail conditions (53.13%) was from pharmacies. Older medications account for 34.93% of medication used for hair conditions, 27.90% for skin conditions and 21.87% for nail conditions.

They state a plethora of reasons for self-medication including minor illness (26.67%), previous experience with the condition (20.37%), time constraint (12.96%), high treatment costs (15.19%) and lack of faith in the healthcare system (5.19%).

Information regarding medication and dosage was observed to have been obtained from family and friends (44.48%), internet sources (18.97%), previous prescriptions (14.48%), medical staff (11.38%), community pharmacies (4.83%), drug advertisements (3.10%) and medical textbooks (2.76%). Maximum number of the participants

(32.01%) resorted to self-medication only while they experienced skin conditions while 21.71% and 18.86% of the participants self-medicate weekly and daily respectively. About 5.71% of the participants self-medicate twice in a month while 5.14% self-medicate once in two months. 4% of the participants admitted to self-medicating in a period of less than two months.

262 students (89.73%) viewed self-medication as a part of self-care and supported its practice while 30 students (10.27%) viewed it as a potential risk of causing side effects. Chi-square tests proved a correlation that the maximal part of the population advocating self-medication are those who resort to self-medication in the event of health distress. (CI 95% 1.000-4.834, OR 2.199) 180 students (61.64%) visited the doctor when the same conditions appeared again and 112 students (38.36%) used the same medication as last time.

When the participants were questioned about whether they experienced some side effects due to their self-medication practices, 259 students (90.86%) said they didn't experience any side effects while 16 students (9.14%) did experience some side effects.

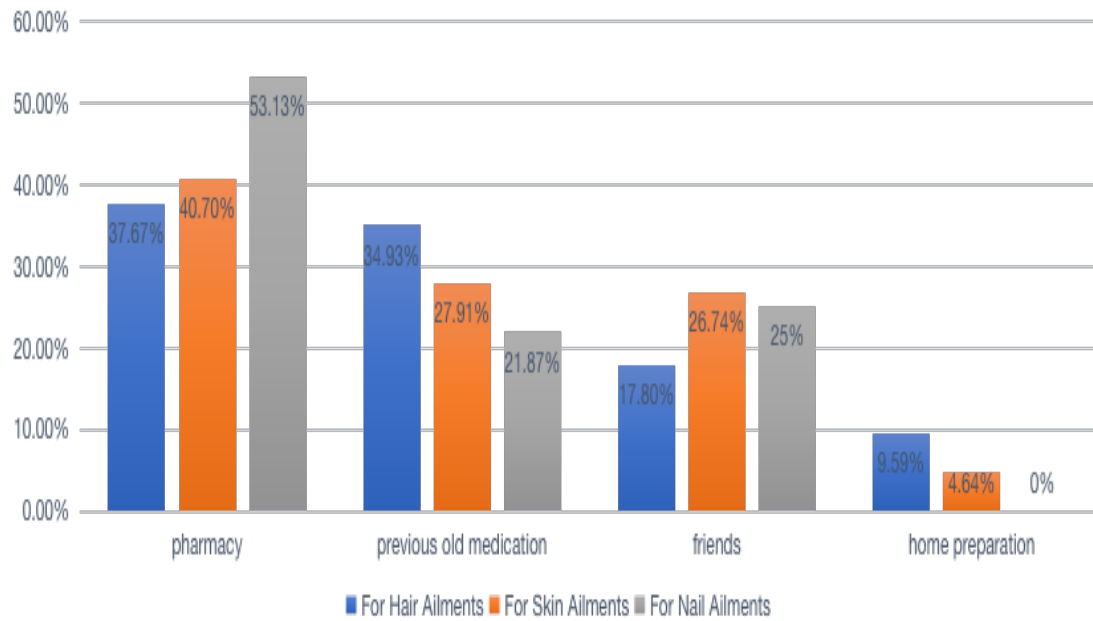


Figure 2:

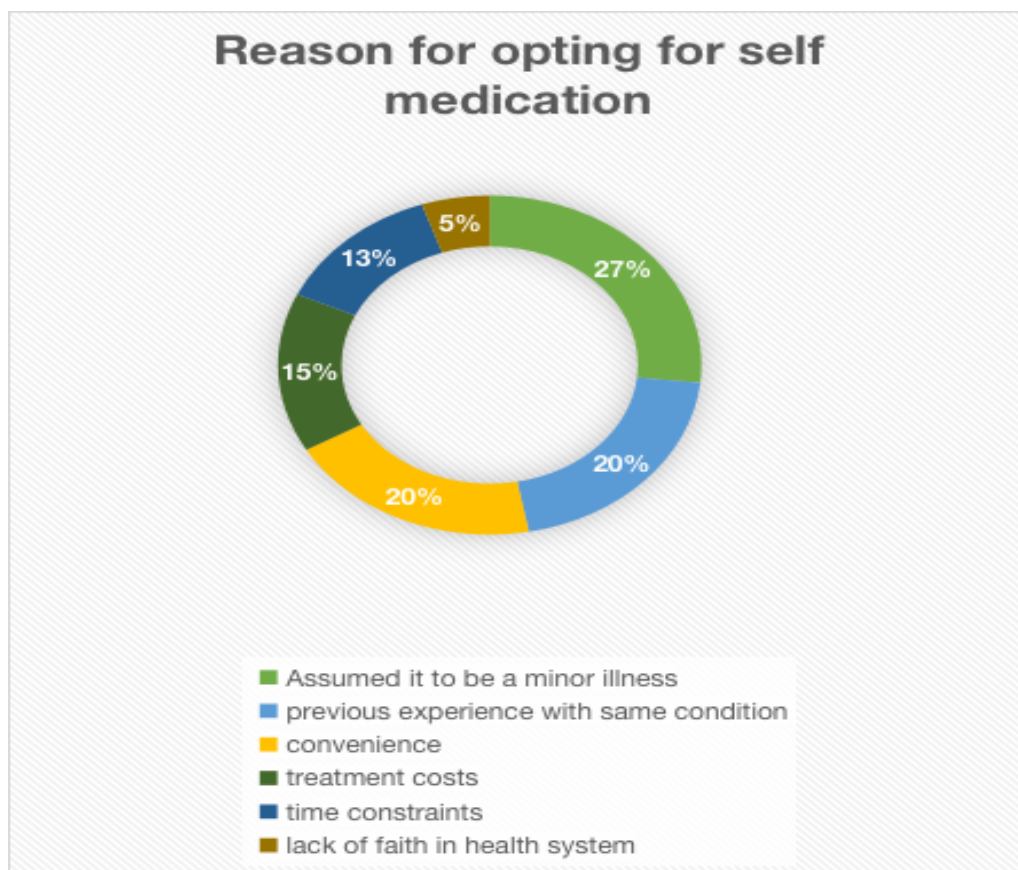


Figure 3:

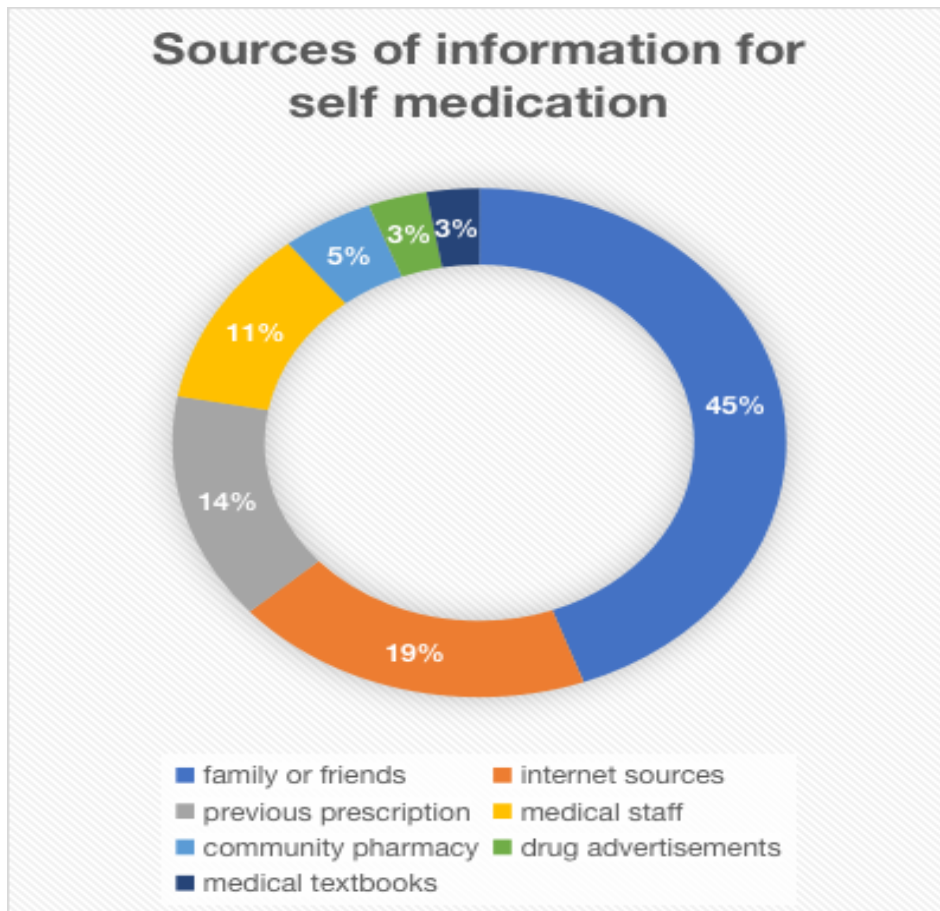


Figure 4:

Frequency of Use of Medication

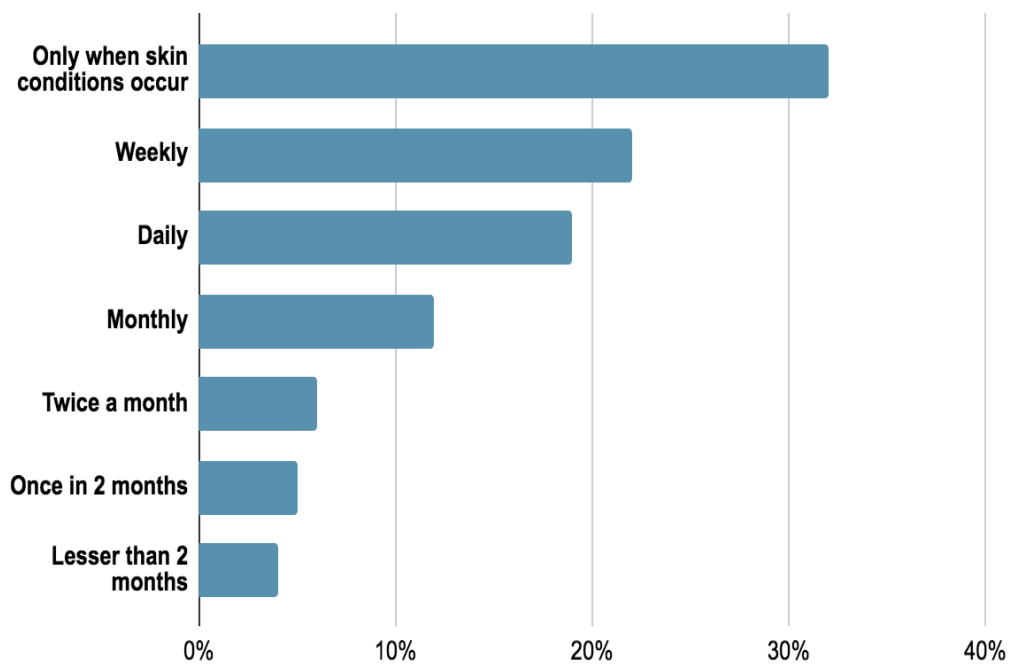


Figure 5:

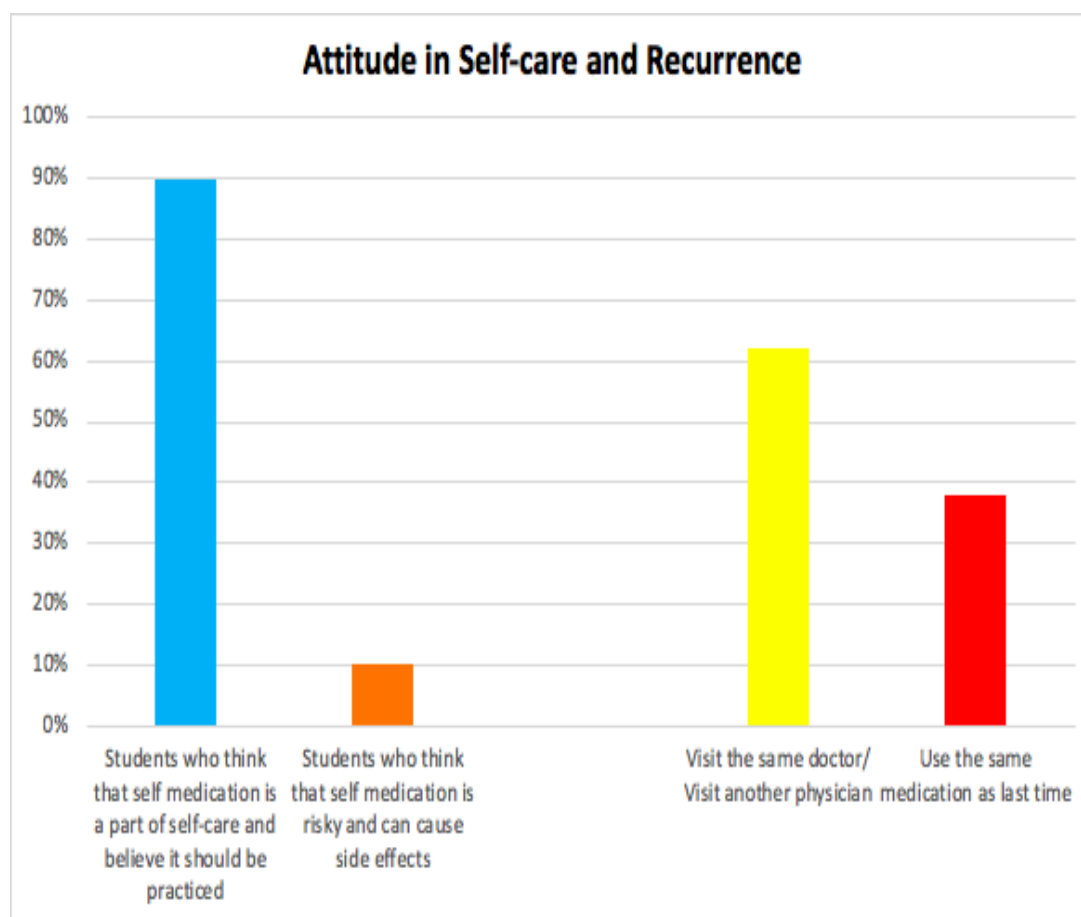


Figure 6:

Discussion

This study has been aimed at the comprehensive analysis of the patterns of self-medication for dermatological conditions among university students.

Self-medication for dermatological conditions is generally accompanied by various risks and benefits. Many dermatological conditions present with similar symptoms or manifestations, but the causes for the conditions may be different therefore making the medication and treatment different. The remedy for the conditions may even prove to be conflicting, hence worsening the condition of the patient. The medicines used for the cure of such conditions contain various levels of topical and general steroids that have to be administered in specific dosages and tapered down to the desired level to prevent addiction and other side effects.

The results of the study found the prevalence of self-medication for dermatological conditions among university students to be 59.93%. (Range to be filled) Varied reasons have been put forth by the participants for self-medicating. Conditions deemed as minor illnesses (26.67%) are often treated by self-medication due to the lack of severity or complexity. Previous experience and familiarity with the disease (20.37%) is another

reason frequently acclaimed. In this increasingly faster work environment with less time for interpersonal and intrapersonal relationships, people more often than not do not find to tend to their health conditions. They resort to the easiest and less time-consuming method of treatment for instant relief [9]. Thus, time constraint (12.96%) and convenience (19.63%) are among other widely cited reasons for self-medication. It is often assumed that the economic condition of an individual determines their self-medication pattern. It is said that those belonging to the lower economic strata show higher involvement in self-medication [10]. But contrary to popular belief, this study observed that the income of the individual does not hold any significant association with the self-medication practices. It is observed that more people resort to self-medication across all income groups.

In the categorical survey of dermatological issues, the hair condition reported the most is hair fall (68.84%) followed by dandruff (55.14%). Acne (36.30%) was found to be the most prevalent skin condition among the studied population. Acne is a typical skin condition commonly found in areas that experience a tropical and humid climate such as Chennai. The pollution accompanying the bustling activity of the city also aggravates such

skin conditions [11]. Nail conditions such as overgrowth of nails, crumbling of nails, discoloration and separation of the nail from the nail bed were reported in approximately 23.98% of the respondents.

The study recorded that only 32.01% of the participants resorted to the usage of non-prescription medicines when there was a requirement. Over 21.71% of the participants admitted to weekly usage of medicine while 18.86% resorted to usage on a daily basis. This pattern of usage without the consultation of physicians raises concerns over the incautious behaviour of subjects during self-medication [12]. The irregular usage of such steroidal medicines may lead to bacterial resistance, overuse and addiction or other adverse side effects such as hypersensitivity along with withdrawal symptoms [13,14].

These products need not be dispensed by a pharmacy owing to the lack of dermatologically active elements but they too may have several chemical components that need to be analysed before usage. 61.64% of the respondents reported that they consult physicians only in case of recurrent diseases or problems. About 38.36% of the respondents admitted to the continual usage of the same medication for relief. (Needs improvement)

81.39 per cent of those who suffer from skin conditions reported having self-medicated using products such as ointments, creams and lotions while 18.60 % resorted to the use of capsular medicines and tablets. Only 9.30 % use herbal or traditional methods of treatment. The most used treatments for hair-related conditions are shampoos (64.38%), lotions and creams (19.18%) and herbal medications (13.01%). The high percentage of self-medication for skin conditions using lotions and creams stems from the externally visible nature of conditions such as acne and darkening of the skin. The extensive use of self-medication for the treatment of acne among youngsters may be a consequence of low esteem and polarising media advertising for anti-acne medication [14]. Acne, a disfiguring disease misconstrued as a trivial condition may threaten the patient's life if mistreated [6]. These conditions are usually treated by self-medication without realising the various risks behind the wrongful administration of doses and chemicals [15]. Thus accuracy in the diagnosis of the disease is vital.

The curing of dermatological conditions using over-the-counter or non-prescription medicines is usually based on a previous diagnosis, a similar diagnosis in another member or the availability of medicine for the observed symptom. This also flags concern regarding the transfer of unverified

information regarding self-medication. Families and friends who are in close contact (physical or virtual) play an important role in this regard [16]. They act as the source of information for self-medication in 44.48% of the cases. With the advent of the internet and widespread globalised access to unverified information, the usage of online sources for medical advice has increased manifold. Internet sources act as a guide for self-medication in 18.97% of the cases [17]. The other sources of information are previous prescriptions, community pharmacies, medical staff, drug advertisements and medical textbooks. The major checkpoint of self-medication often overseen is that treatment varies from patient to patient depending upon the response to the components of the drug. Wrong intake of drugs may lead to fatal allergies or discomforting side effects [13].

Pharmacists and pharmaceuticals play an important role in the provision of medical advice, information regarding dosage and side effects, etc [18]. In developing countries such as India, pharmacists act as an important link between the healthcare system and patients due to a dearth of qualified healthcare professionals such as physicians. However, pharmaceuticals and pharmacists are involved in the promotion of self-medication and experimentation among the general public [19]. This study finds incriminating evidence for the lack of regulatory policy, planning and drug distribution control in pharmacies. The respondents overwhelmingly source non-prescription drugs for hair conditions (37.67%), skin conditions (40.69%) and nail conditions (53.13%) from pharmacies. Older medications account for 34.93% of medication used for hair conditions, 27.90% for skin conditions and 21.87% for nail conditions. This therefore flags the necessity for governmental regulation on practices such as "counter-pushing" and audit of the relationship between healthcare professionals and pharmaceutical agencies. This study has observed that a major part of the studied population deems self-medications as an essential and necessary means of healthcare (89.73%). The Chi-square tests revealed a positive correlation that the maximal part of the population advocating self-medication are those who resort to self-medication in the event of health distress. This ethical and safety aspect of self-medication has taken a serious toll on the minds of students and this attitude needs to be rectified at the earliest. There is an assumption among patients that medical knowledge available through various channels is legitimate and hence there is a laxity in the verification of dosage and other important information [12, 17]

Dermatological conditions remain an economic burden on society [6]. Informed self-medication of these conditions has a positive impact and relieves the burden of the healthcare system, therefore

proving efficient. It may help in saving time and reducing the consumption of resources. Nevertheless, the consequences of unmindful self-medication may be lethal and life-threatening [20]. Self-medication as a part of self-care: The International Council of Nurses (ICN) regards Self-medication as a crucial aspect of self-care, especially in times of increased non-communicable diseases and increased consumer awareness. Thus, self-medication remains an underutilised pillar of the Healthcare ecosystem, and several breakthroughs remain to be made.

There needs to be a line drawn between responsible self-medication and harmful practices. The World Medical Association (WMA) has put out a statement on responsible self-medication practices, which stresses adequate knowledge and caution when self-medicating. In particular, patients must be able to recognise symptoms, choose an appropriate product, and use the product appropriately. On the other hand, physicians have a separate responsibility to educate patients on the potential risks of self-medicating, before they engage in the same [7].

Self-medication is a vital part of an individual's approach towards the maintenance of health and the treatment of minor illnesses [21]. However, there also exist pre-conditions and information to be internalised before the usage of any drug. The apparent assumption that all minor illnesses can be treated with self-medication and can be handled with the same dexterity as a physician sets a dangerous precedent [22]. Thus, informed usage of a drug or product concerning dosage and side effects is highly imperative [21].

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