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RESEARCH ARTICLE

A Cross-Sectional Study on the Frequency, Origins, and Treatment of Skin Problems Among Pharmacy Students and Staff

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Abstract

Skin problems are a frequent but often overlooked health concern among students and healthcare practitioners and are attributed to stress, chemical exposure, and environmental conditions. To evaluate the prevalence, possible causes, management practices, and awareness regarding skin problems among pharmacy students and staff. A cross-sectional, questionnaire-based survey was set up with 61 respondents from the Pharmacy Department. The data were evaluated to find patterns of skin conditions, causes, preventive measures, and awareness levels. Nearly half of the subjects (45.9%) said that they had skin troubles in the past half year. The most common problems were rashes (14.8%), dry skin (13.1%), pimples (22.7%), and itching (19.7%). The face (63.9%) was the area most affected. The main sources of skin conditions were dust (26.2%), laboratory chemicals (26.2%), and stress (11.5%) respectively. Only 47.5% took precautions, whereas 63.9% showed willingness to start a skin health awareness program. Chi-square analysis demonstrated a statistically significant association between laboratory chemical exposure and skin problems, as well as between awareness level and use of preventive measure ($p<0.05$). Skin disorders are common among pharmacy students and staff and mainly attributed to occupational and environmental factors. Raising the level of awareness, introducing preventive measures, and offering educational support can greatly alleviate these problems.

Keywords: Use about five keyword and separated by semicolon

1. Introduction

This The skin is the largest organ of the human body and it performs many functions such as acting as a barrier and allowing the body to remove heat and perform various activities that lead to the production of heat an sensation, as well as the synthesis of vitamin D [1][2][3]. It is made up of three main layers—epidermis, dermis, and hypodermis—and the skin's structure supports its function of protection, with the epidermis being the first line of defense against invading germs [2][3]. Genetic factors play a role in skin health by influencing water content, softness, and the formation of vital proteins like collagen and elastin, which in turn affect aging and the likeliness of developing certain diseases [4]. Skin diseases such as eczema and psoriasis are widespread among different ethnic groups and individuals, and they not only lead to a considerable financial burden on healthcare systems but also bring up the issue of knowing both genetic and environmental factors while dealing with skin health [5][6].

The occurrence of skin-related problems among pharmacy students, which has been reported to be close to 50%, is in line with different studies conducted in academic health-related populations, where the same rate of skin conditions like acne and rashes are mentioned [7]. One of the main reasons is the exposure to the environment, including the frequent handling of chemicals and sanitizers in laboratory areas, which might cause skin irritation and hypersensitivity [8][9]. Apart from that, psychological stress, which was worsened by the COVID-19 pandemic, has been also associated with the increase in skin problems, as the surveys showed that more than 70% of medical students had acne during that time [10]. Even though the pharmacy study did not measure the actual level of skin problems, it is still alarming that over 50% of the subjects reported not using any protective measures, thus indicating a crucial need for skin health education [11] [12]. This situation of lack of awareness, which was characterized by only 9.8% of the subjects being very aware of skin health, calls for the need of specific training in order to reduce these dermatological risks [12].

2. Methodology:

2.1 Study Design and Participants

A cross-sectional descriptive nature was conducted on 61 participants from the Pharmacy Department, ,including students, faculty members, and non-faculty staff.

2.1.1 Inclusion Criteria

a) Age between 18 and 35 years.

b) Enrolled in D.Pharm, B.pharma, M.Pharm, Pharm. D programs ,or employed in the pharmacy department.

c) History of skin issues example rashes,dryness, urticaria, eczema, within the last 12 months.

2.1.2 Exclusion Criteria

a) Age below 18 years

b) Individual not enrolled in pharmacy programs or not employed in pharmacy department

2.1.3 Data Collection

Data were collected using a structured Google Form questionnaire covering demographics, frequency and types of skin problems, management practices, affected areas, perceived causes, managements practices, preventive behaviours and levels of awareness.

2.1.4 Statistical Analysis

Data were summarized using frequencies and percentages, inferential analysis was performed using the Chi-square ($\chi 2$) test to examine associations between categorical variables such as gender,course of study,laboratory chemical exposure,stress,awarness level ,preventive practices, and the presence of skin problems. A p-value <0.05 was considered statistically significant. Minor variations in percentages are due to rounding and all values correspond to whole-number participant counts.

3. Result:

A total of 61 participants completed the survey ,consisting of 45.9% female, 54.1% male. Most respondents were B.Pharm students (42.6%), followed by D.Pharm students (26.2%), M.Pharm (13.1%) and Pharm.D (9.8%), others (8.3%) with the majority belonging to the age group of 21–24 years (57%). Overall , 59% of participants reported experiencing skin problems within the last six months. The most commonly reported skin conditions were rashes (14.8%), Dryness (13.1%), Eczema (8.2%),urticaria (19.8%).Regarding frequency 27.9% experienced symptoms then “sometimes”, 18% “occasionally”, and 8% “weekly”. In terms of managements , 47.7% of participants used over -the -counter product,19.7% relied on home remedies and 8 % used prescription medications.The most common affected area was face (36%) followed by hands and neck. Stress (26.2%) were identified as the leading perceived causes of skin problems. With respect to awareness and preventive measure ,47.5% reported using protective items such as items (gloves, moisturizers, barrier creams). 39.3% rated their awareness as moderate, 23% as low, and 9.8% as high. Furthermore 37.7% of reported that skin issues affected their productivity. Notably , 63.9% of the participants expressed interest in attending awareness programs on skin health. Chi-square analysis demonstrated a statistically significants association between laboratory chemical exposure and the presence of skin problems($p<0.05$). A significant association was even observed between awarness level and the used of preventive measure ($p<0.05$). No statistically significant association was found between gender and skin problem ($p<0.05$).

Figure Presentation and Interpretation

Figures included in the study represent single variables derives directly from questionnaire data and are

intended solely for descriptive visualization.

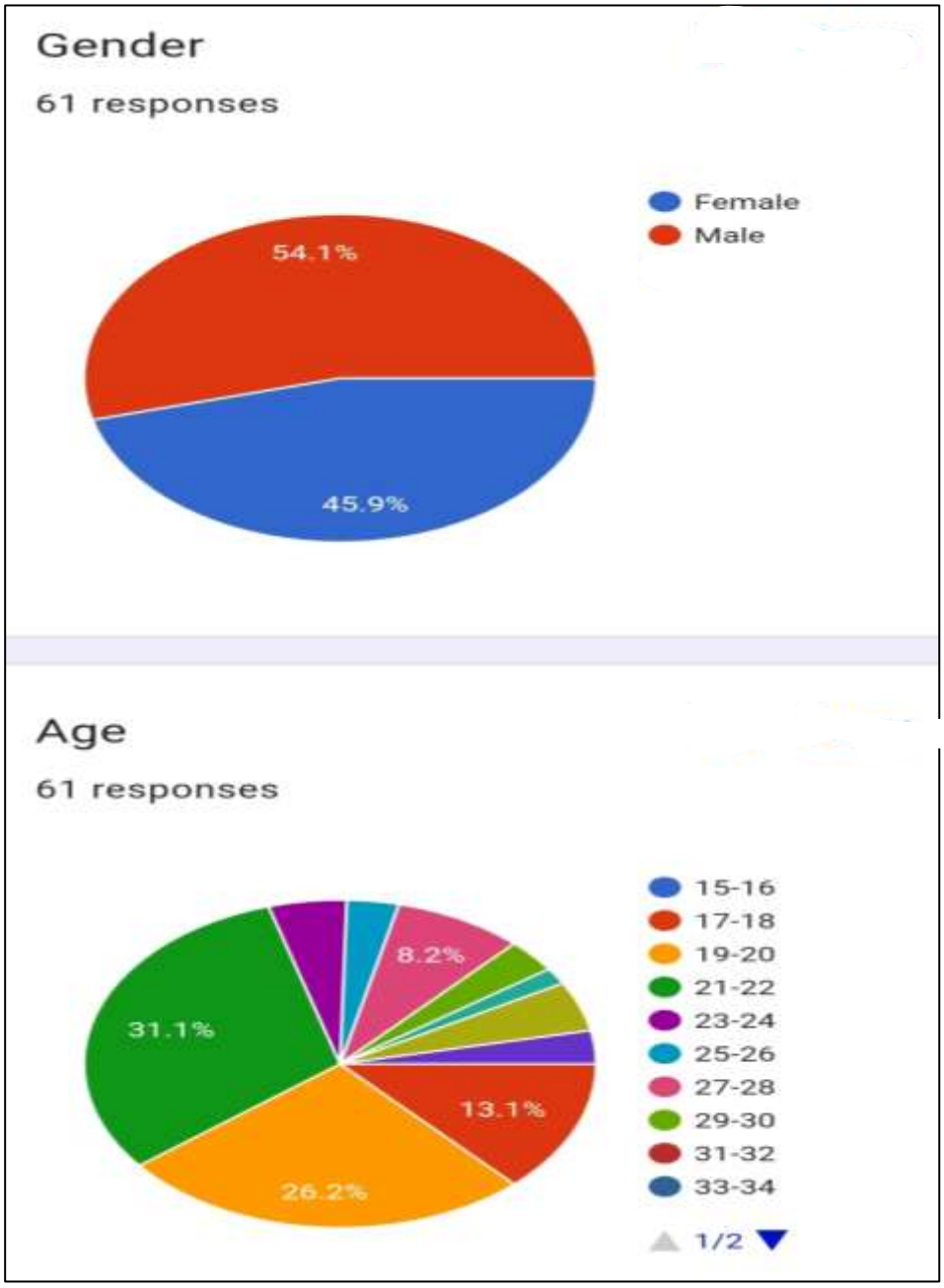

Fig. 1: Gender and Age (D. Bancalari-Díaz 2016).

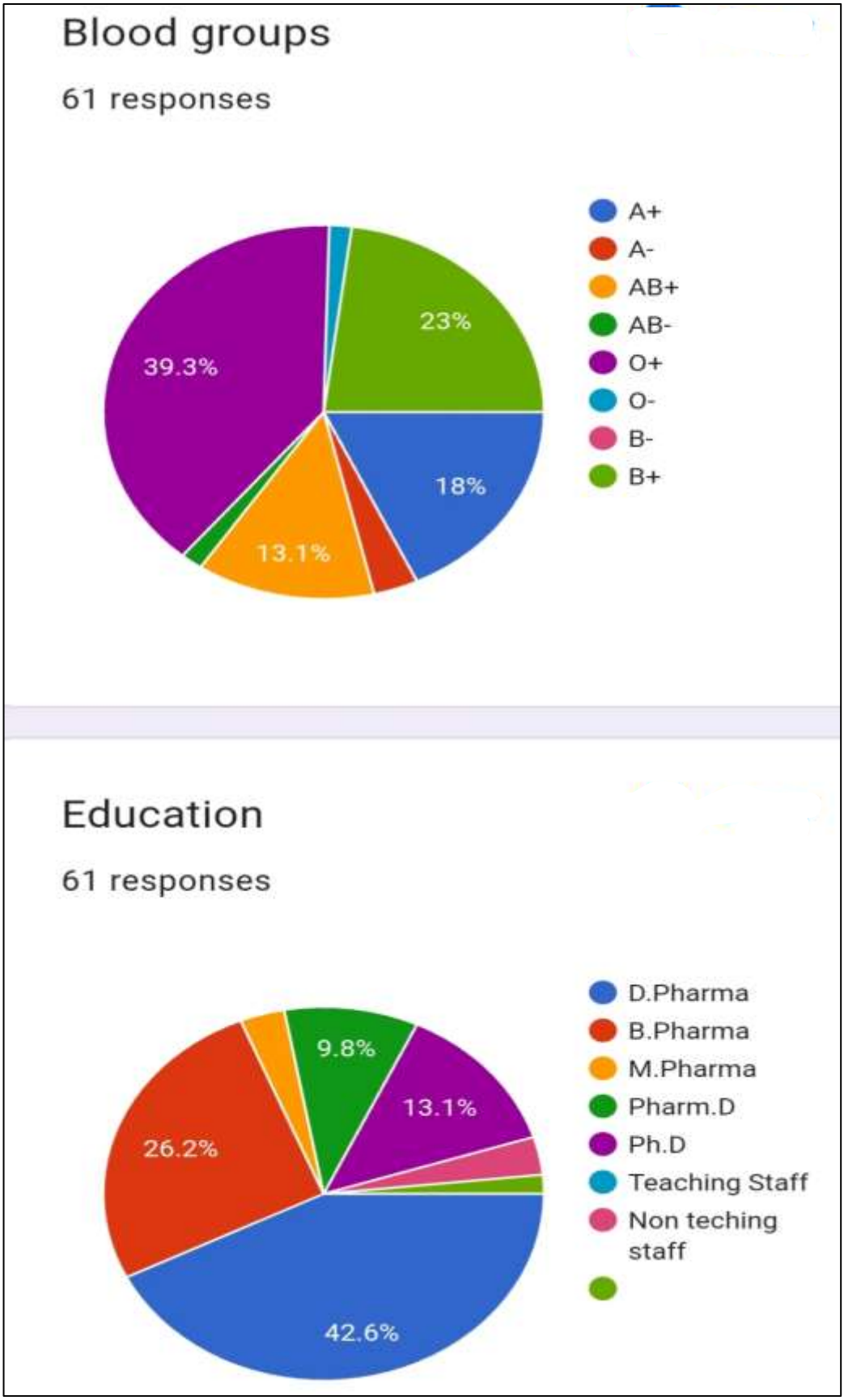

Fig. 2 Blood groups and Education (Farhud 2013)

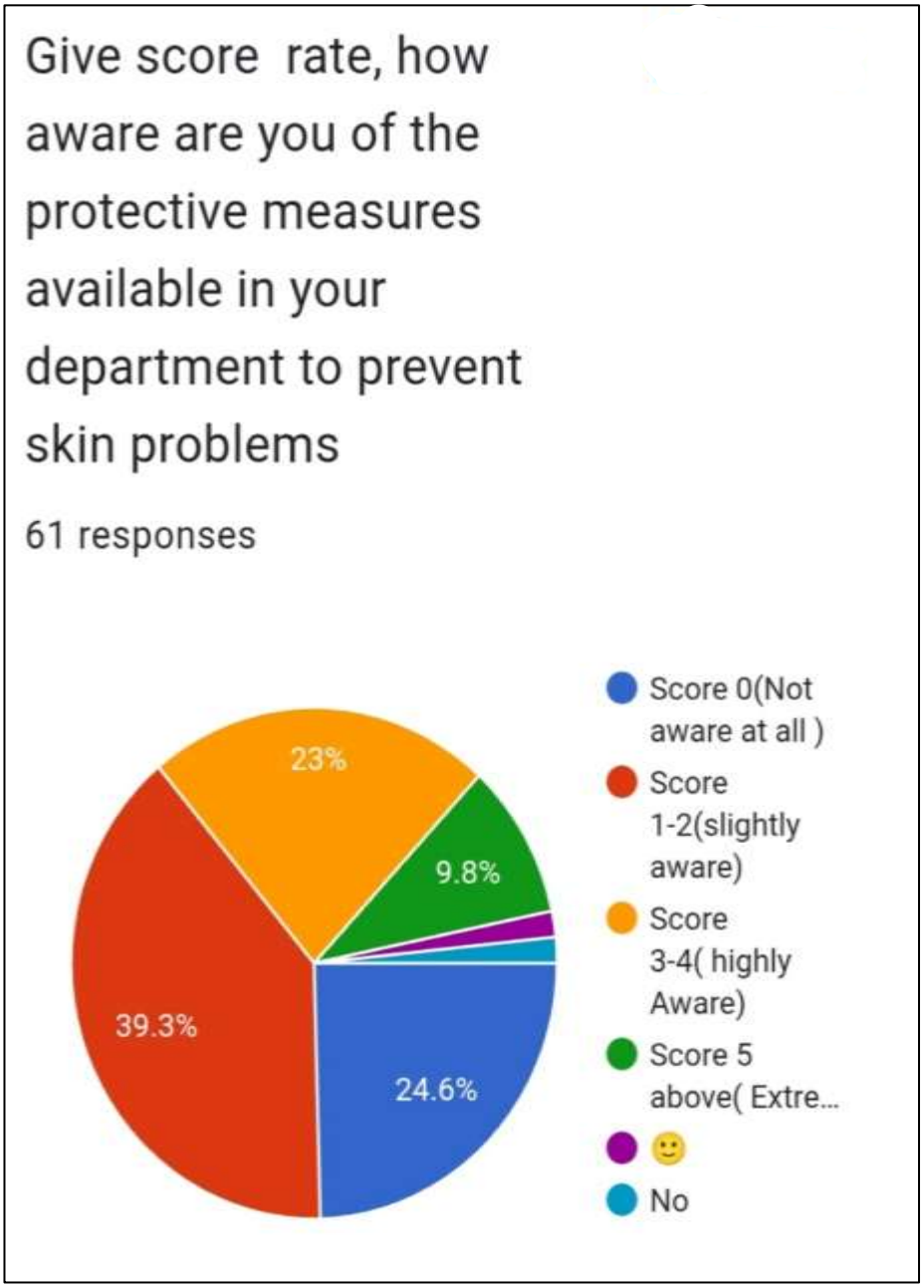

*Fig. 3: Estimate awareness measurement in department (*Bernatchez Sf,2023)

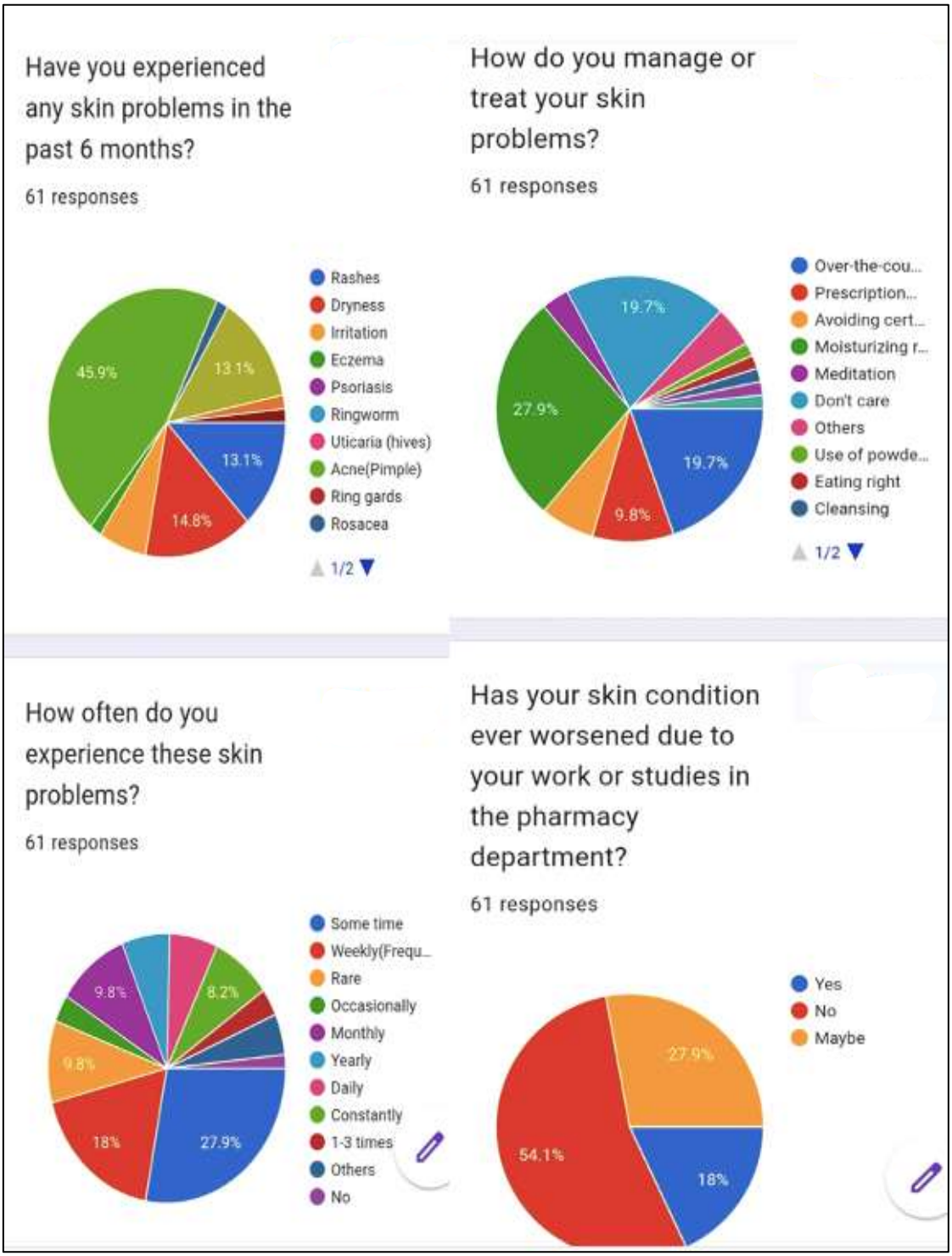

Fig. 4: overview skin problems (Paul Joan 2024)

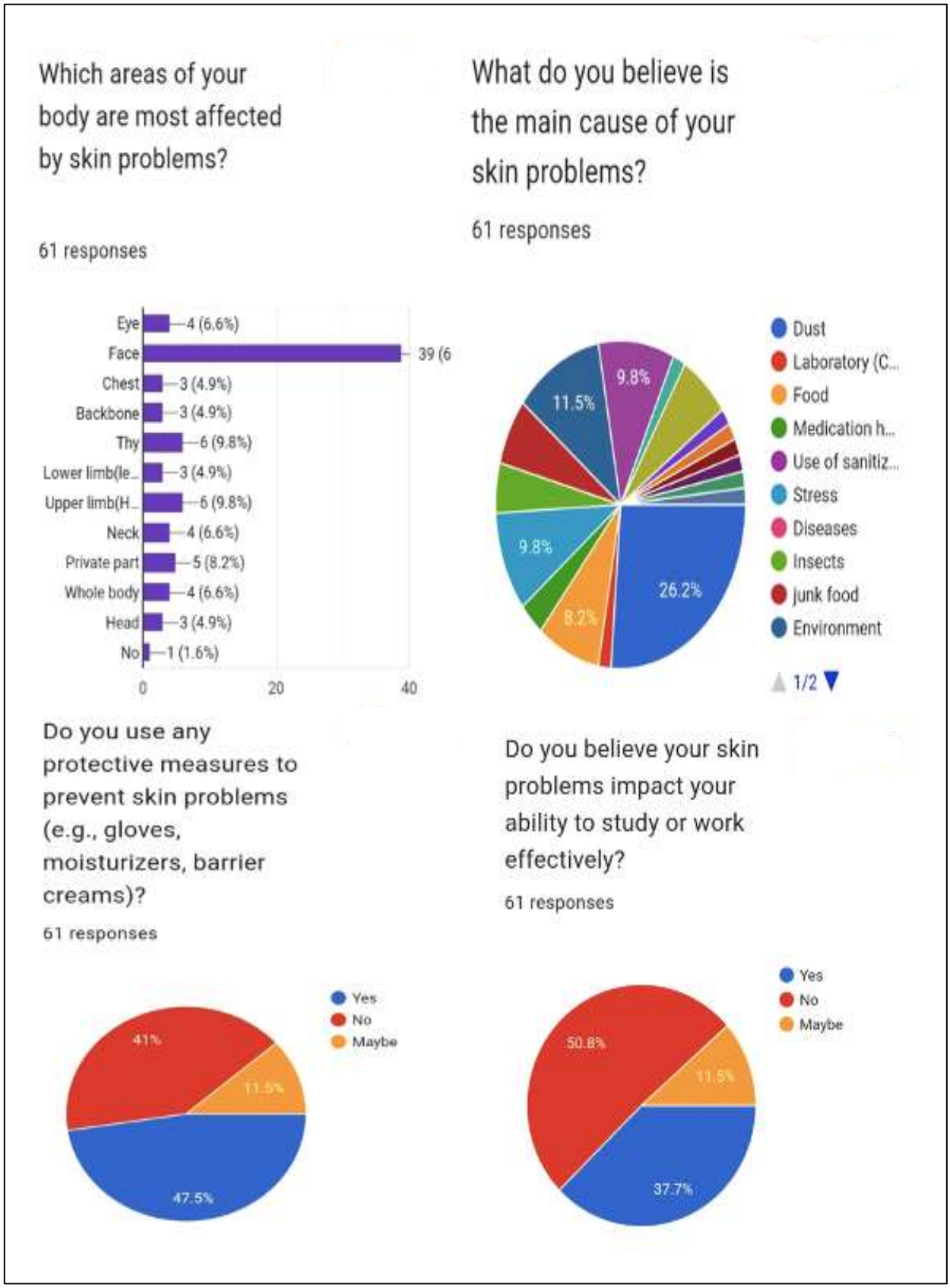

*Fig. 5: Overview aetiology and measurement of skin (*Wilfredo , 2022).

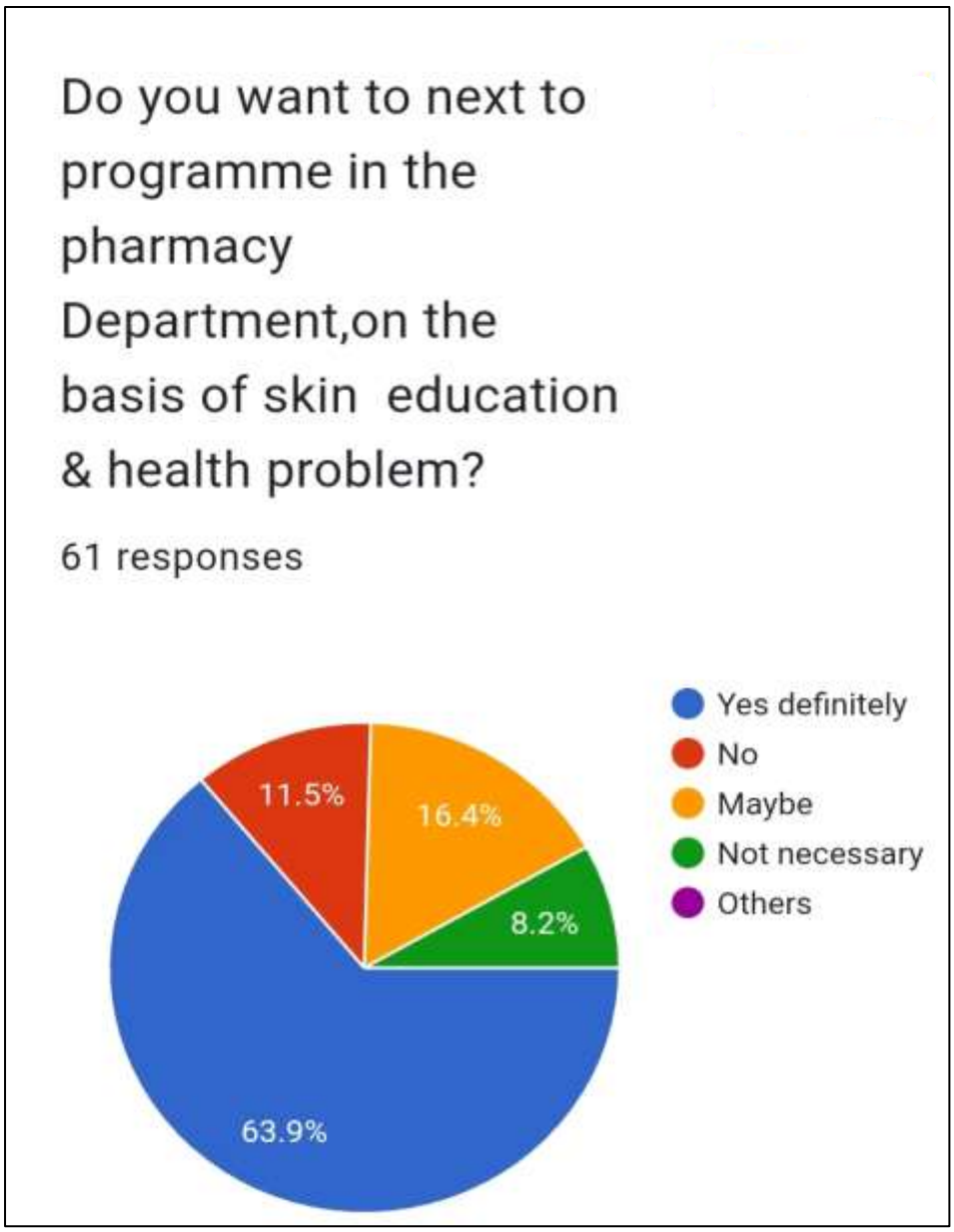

Fig. 6: Demand future prospective on skin education and health proble (Zhang.J,2023)

4. Discussion

The finding of this study indicate that almost 50% of pharmacy students and staff experience skin problems, figure shown number 7, which is the same ratio as in other health-related academic populations [13][7]. The predominance of facial skin problems such as acne and rashes on the face points to both environmental exposure and psychological stress as the main contributors. Working with chemicals, sanitizers, and detergents frequently in the pharmacy lab might lead to dry skin, irritation, and even hypersensitivity. The statistically significant association between laboratory chemical exposure and skin problems underscores the occupational risk faced by pharmacy students and staff. Additionally, the significant relationships between awareness level and preventive practices emphasizes the importance of education in promoting protective behaviours. Despite some level of awareness, more than 50% of participants did not consistently use preventive measures, indicating a gap between knowledge and practice[14][11].

Encouragingly, a major of respondents expressed interest in skin health awareness programs, suggesting receptiveness to preventive education .Integrating dermatological safety training into pharmacy curriculum and ensuring consistent availability of protective equipment (example .Facial cleaning brush) may help reduce the burden of skin problem in this population.

5. **Limitation:**

The study relied on self -report questionnaire data which may be subject to recall bias. The sample sizes was limited and skin conditions were not clinically diagnosed by a dermatologist which may affect generalizability

6. Conclusion

The skin disorder are common among pharmacy students and staff and primarily associated with environmental exposure, laboratory contact, and stress. Although, some awareness of the risks exists, but it is not enough to create preventive and protective measures that will be effective. The implementation of systematic skin protection programs, the constant provision of protective equipment, and the incorporation of dermatological safety education into the curriculum would be great steps to take to lessen the burden of skin-related problems in pharmacy departments considerably.

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Informed Consent: Not Applicable .

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