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AWARENESS ABOUT ALLERGIES AMONG URBAN AND RURAL ADULTS OF EITHER GENDER

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ABSTRACT

It is a cross-sectional study. Total number of respondents were 137. This study was conducted among adult population of both male and female gender. The participants were from both Urban & rural area of residence in a state of Maharashtra, India. Among the respondents 43.06% were male & 56.94% were female. Regarding different varieties of allergies, the participants answered Yes regarding the types of allergies they know drug allergy 42.7% male 57.3% female, food allergy male 39.68% & female 57.94%, allergic rhinitis 45.4% among male and 54.6% female, allergy to mould 19.40% male and 80.5% female, the awareness about indoor allergies 18.46% of male and female 81.54%. Diagnosed with different varieties of allergy male 12.59% and 14.07% of female. It is a major public health threat now-a-day. Its prevalence and impact are on the rise.

KEYWORDS: Allergies, Awareness, Male and Female adult population.

INTRODUCTION

Allergy is a growing health problem that greatly impacts our day -to-day life.[1] Despite its high prevalence, allergy is usually underestimated, under-diagnosed & undertreated too. Allergy affects all age groups. Patients often need assistance in understanding their condition. The clinical manifestations of allergic disease include: asthma, rhinitis, anaphylaxis, drug - food – insect allergy etc. Respiratory manifestations are the most prevalent.[2] As per World Health Organisation (WHO), hundreds of millions of people in the would have rhinitis. Asthma is a chronic inflammation disorder. It is becoming increasingly clear that allergy is a systematic immunological disease initiated by the priming of an adaptive immune response to common allergies. The allergic reaction is biphasic, with an immediate reaction occurring within minutes following allergen exposure and a late-phase reaction occurring hours later. Allergy is a significant burden to society.

MATERIALS AND METHODS

This cross – sectional interview-based study was conducted with a pre-tested and pre - validated questionnaire administered via Google forms to the adult residents of Maharashtra. Informed consent was taken on the Google forms. The date was adapted to Microsoft Excel spreadsheet.

RESULTS AND DISCUSSION

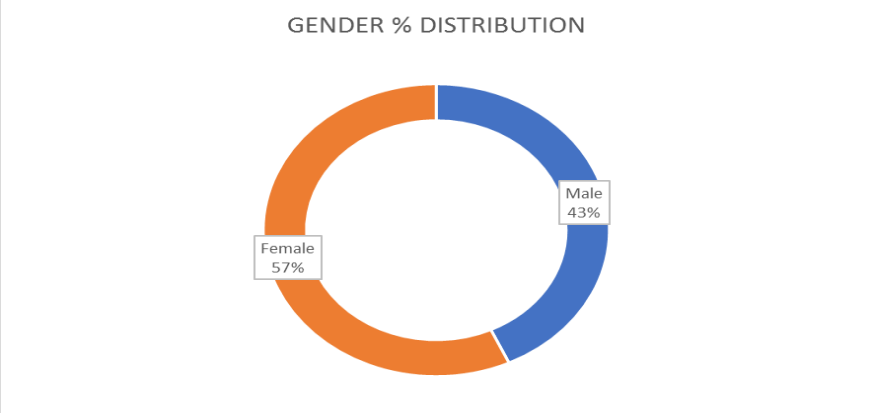

Fig. 1: Sex Distribution.

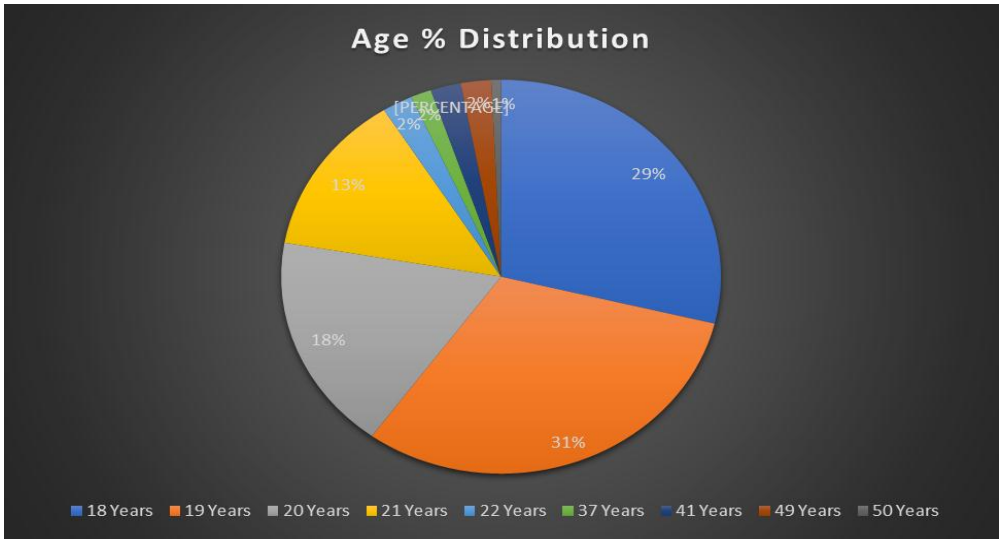

Fig. 2: Age Distribution.

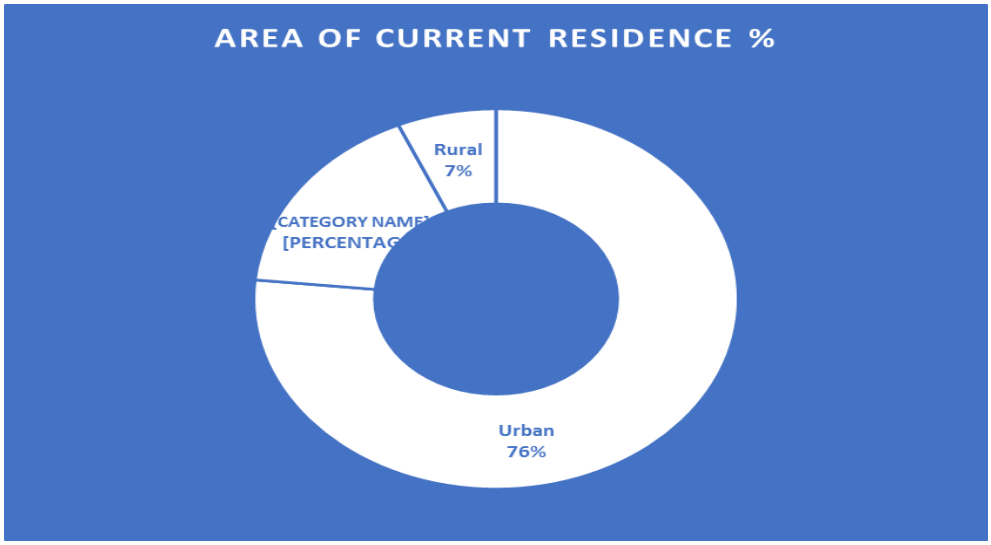

Fig 3: Area of Current Residence.

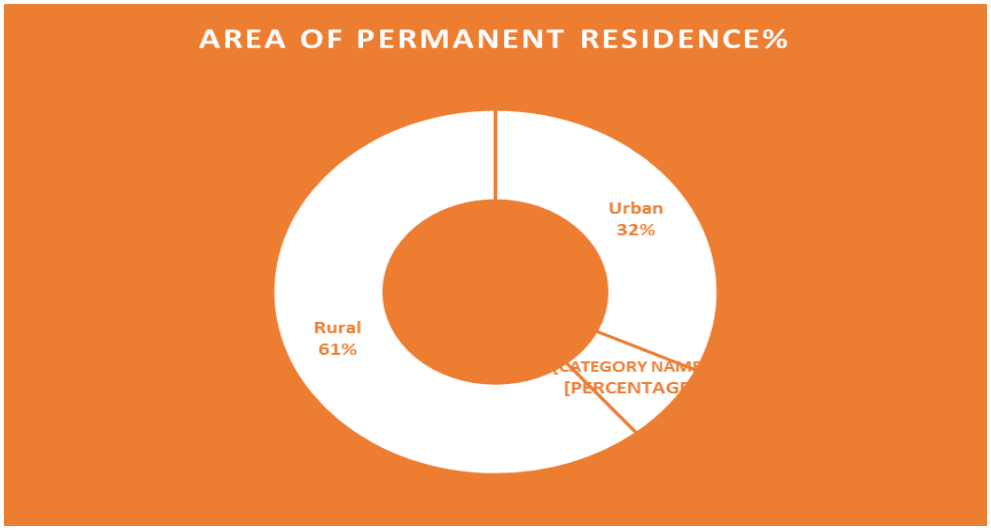

Fig 4: Area of Permanent Residence.

Table 1: Types of Allergies Heard About.

ALLERGIES	MALE	FEMALE	TOTAL
Drug allergy	47 (42.7%)	63 (57.3%)	110
Food allergy	50 (39.68%)	76 (60.31%)	126
Contact Dermatitis	23 (30.26%)	49 (69.74%)	76
Latex allergy	11 (23.91%)	35 (76.09%)	46
Allergic asthma	51 (42.06%)	73 (57.94%)	126
Allergic rhinitis	34 (45.4%)	41 (54.67%)	75
Animal allergy	39 (35.64%)	65 (64.36%)	101
Anaphylaxis	19 (28.36%)	51 (76.12%)	67
Allergy to mould	13 (19.40%)	54 (80.59%)	67
Indoor allergies	12 (18.46%)	53 (81.54%)	65

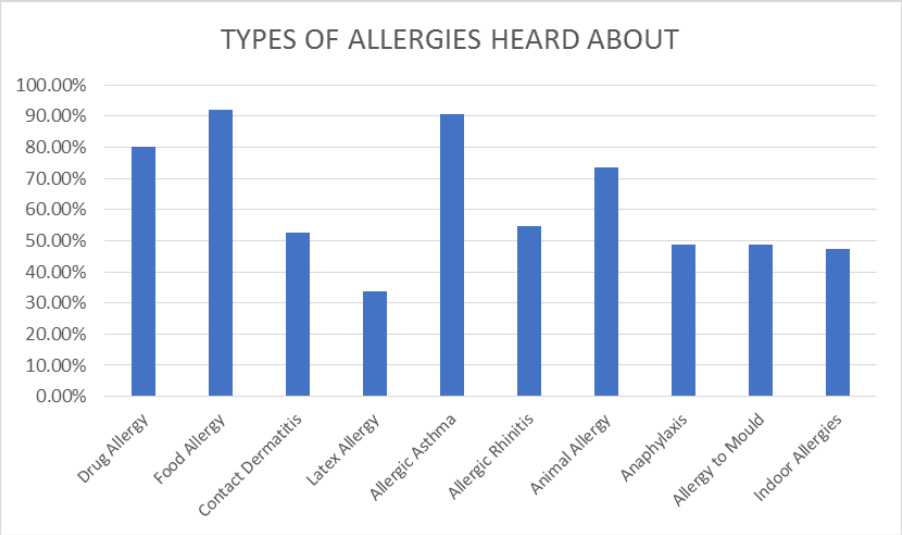

Fig. 5: Types of Allergies Heard About.

Table 2: Diagnosed with Allergy.

Gender	No	Yes	Grand Total
Female	42.96%	14.07%	57.04%
Male	30.37%	12.59%	42.96%
Grand Total	**73.33%**	**26.67%**	**100.00%**

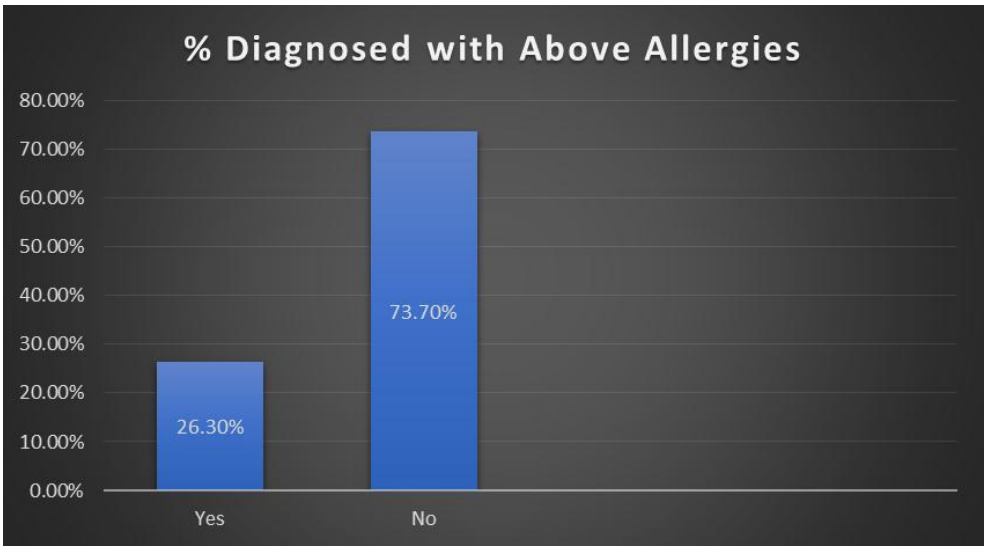

Fig 6: Diagnosed with Allergy.

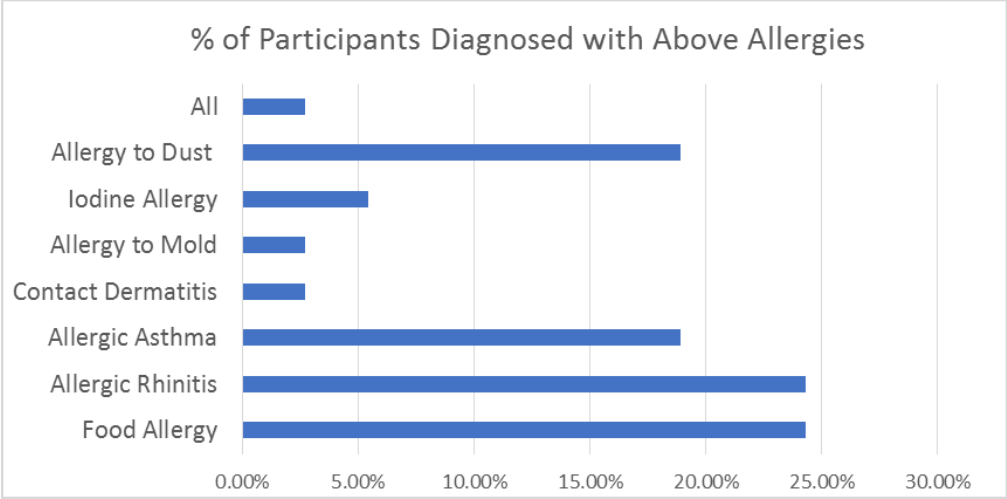

Fig 7: Participants diagnosed with above-mentioned Allergies.

Table 3: Participants with Tobacco Smokers at Home.

Gender	No	Yes	Grand Total
Female	51.85%	5.19%	57.04%
Male	36.30%	6.67%	42.96%
Grand Total	**88.15%**	**11.85%**	**100.00%**

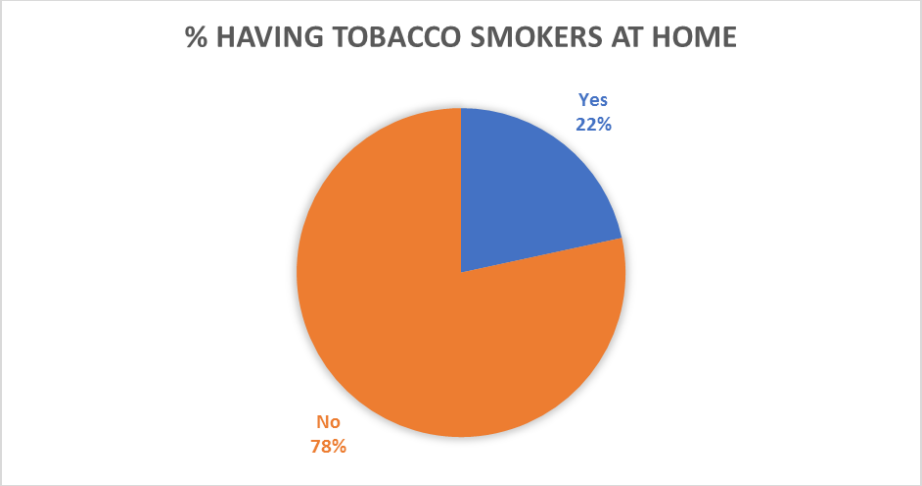

Fig. 8: Participants with Tobacco Smokers at Home.

Table 4: Participants experiencing mentioned symptoms.

SYMPTOMS	MALE	FEMALE	TOTAL
Sneezing	51 (43.58%)	66 (56.42%)	117
Watery eyes	33 (38.82%)	52 (61.18%)	85
Itchy Nose	24 (30.77%)	54 (69.23%)	78
Wheezing	13 (30.95%)	29 (69.05%)	42
Shortness of breath	15 (38.46%)	24 (61.54%)	39
Nausea	13 (29.55%)	31 (70.45%)	44
Vomiting	12 (28.57%)	30 (71.43%)	42
Diarrhoea	9 (31.03%)	20 (68.97%)	29
Convulsions	1 (14.29%)	6 (85.71%)	7
Swelling Around Mouth	3 (37.5%)	5 (62.50%)	8
Hives	1 (20.00%)	5 (80.00%)	6
Snoring	6 (31.58%)	13 (68.42%)	19

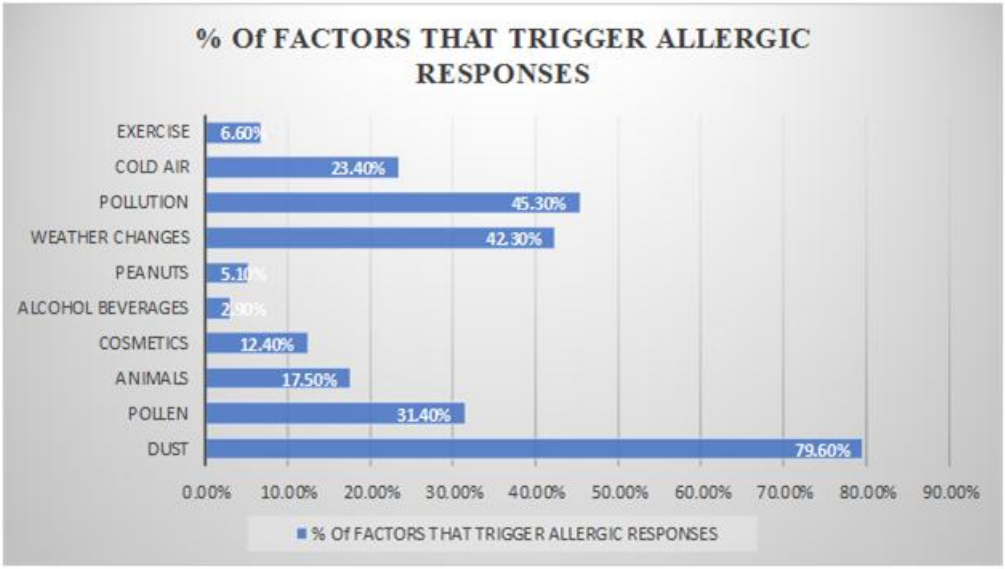

Fig. 9: Factors that trigger Allergic Responses.

Table 5: Participants whose symptoms are better away from home.

Gender	No	Yes	Grand Total
Female	40.74%	16.30%	57.04%
Male	25.93%	17.04%	42.96%
Grand Total	**66.67%**	**33.33%**	**100.00%**

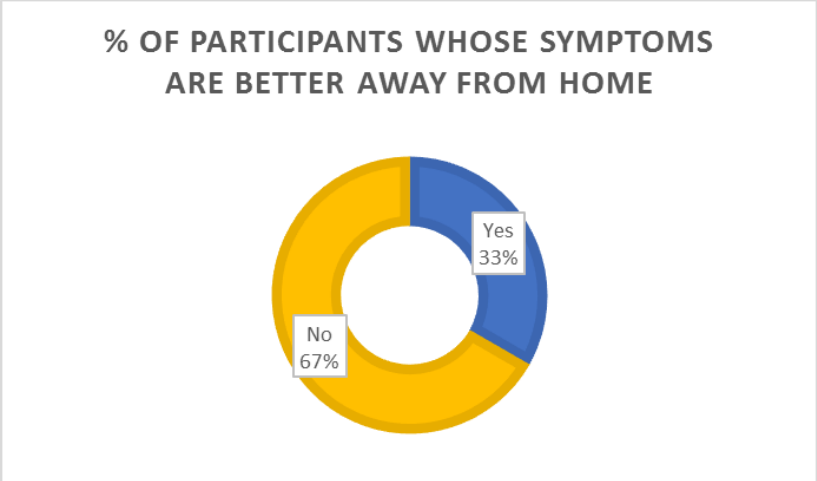

Fig 10: Participants whose symptoms are better away from home.

Table 6: Participants that consider change in perception due to diagnosed with allergy.

Gender	No	Yes	Grand Total
Female	39.26%	17.78%	57.04%
Male	28.15%	14.81%	42.96%
Grand Total	**67.41%**	**32.59%**	**100.00%**

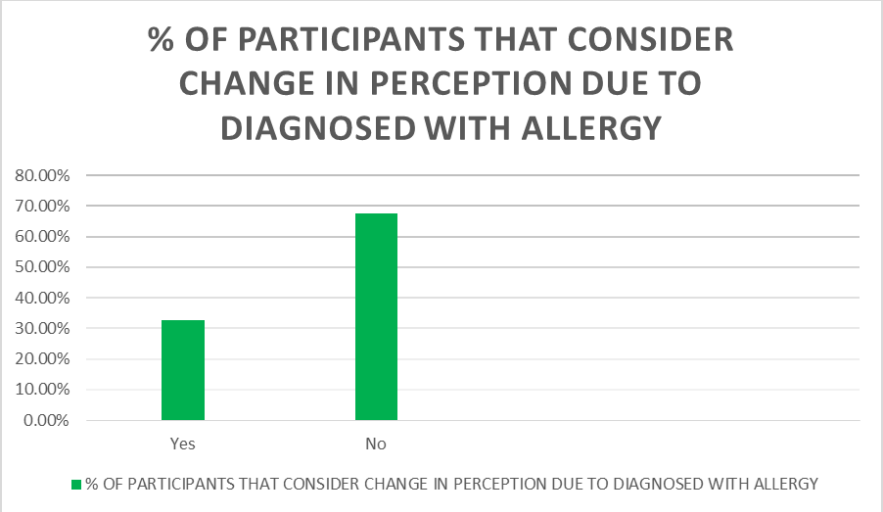

Fig 11: Participants that consider change in perception due to diagnosed with allergy

Table 7: Participants whose perception will change in a positive / negative way.

Gender	Negative	Not applicable	Positive	Grand Total
Female	6.67%	37.04%	13.33%	57.04%
Male	2.22%	25.93%	14.07%	42.96%
Grand Total	**8.89%**	**62.96%**	**27.40%**	**100.00%**

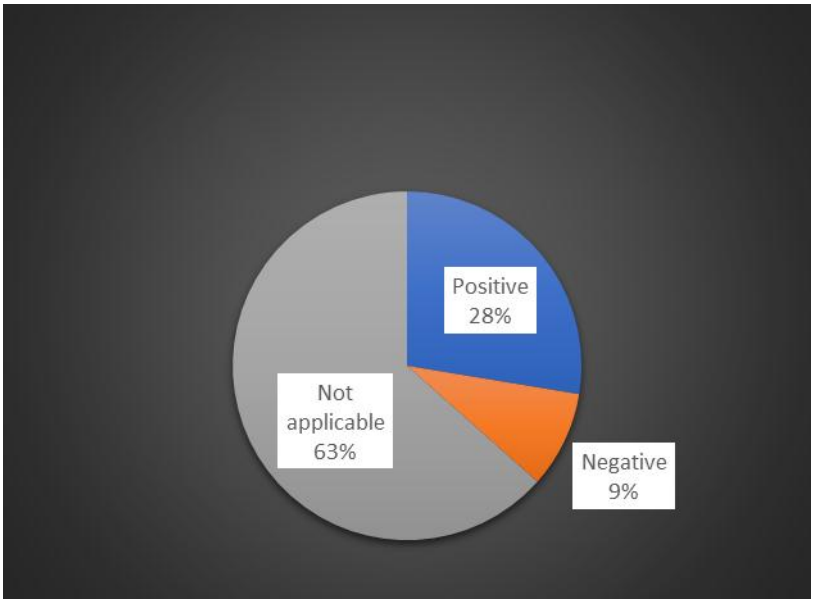

Fig 12: Participants whose perception will change in a positive / negative way.

Table 8: Participants who think allergy can be cured.

Gender	No	Yes	Grand Total
Female	24.44%	32.59%	57.04%
Male	22.22%	20.74%	42.96%
Grand Total	**46.67%**	**53.33%**	**100.00%**

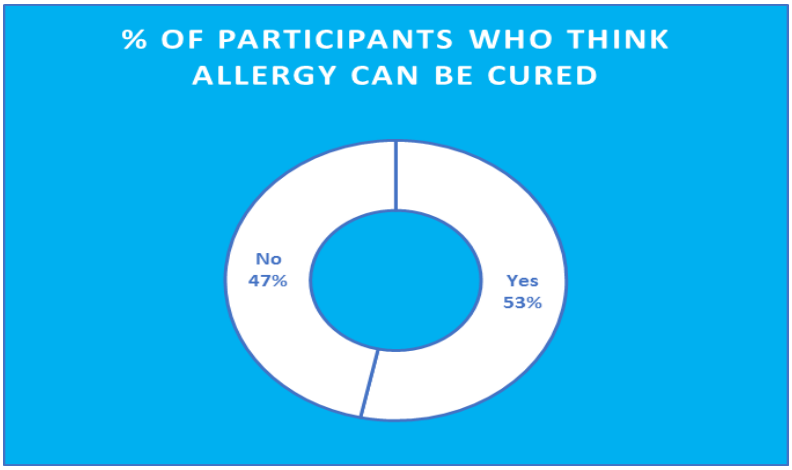

Fig 13: Participants who think allergy can be cured.

Table 9: Participants feeling allergic symptoms in a particular season

Gender	No	Yes	Grand Total
Female	37.78%	19.26%	57.04%
Male	27.41%	15.56%	42.96%
Grand Total	**65.19%**	**34.81%**	**100.00%**

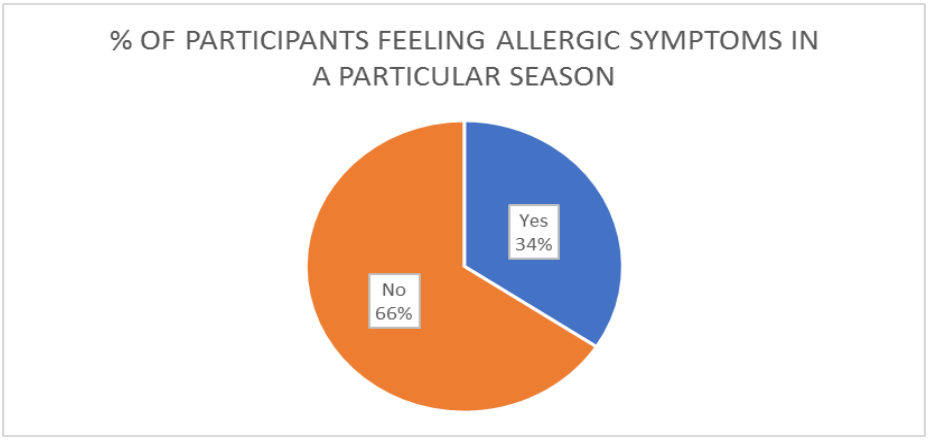

Fig. 14: Participants feeling allergic symptoms in a particular season.

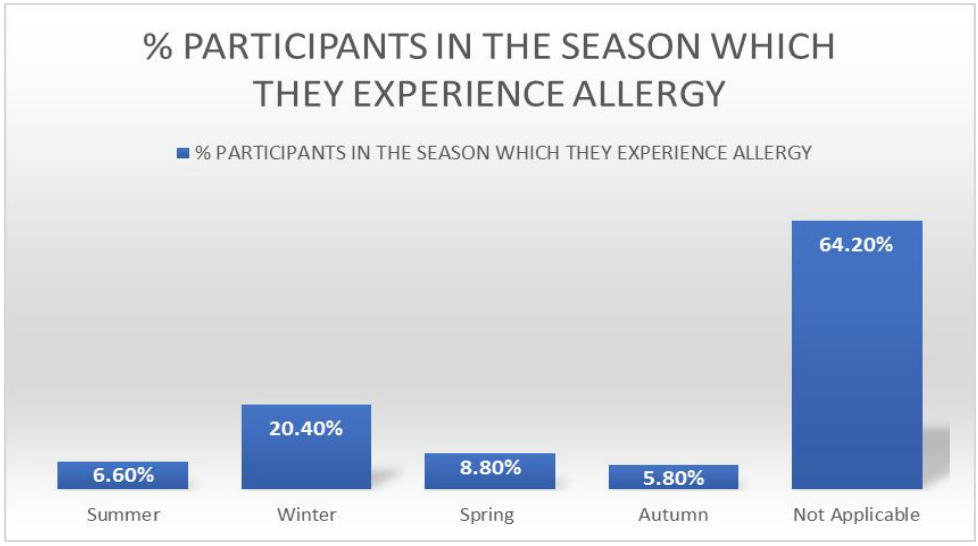

Fig. 15: Participants in the season which they experience allergy.

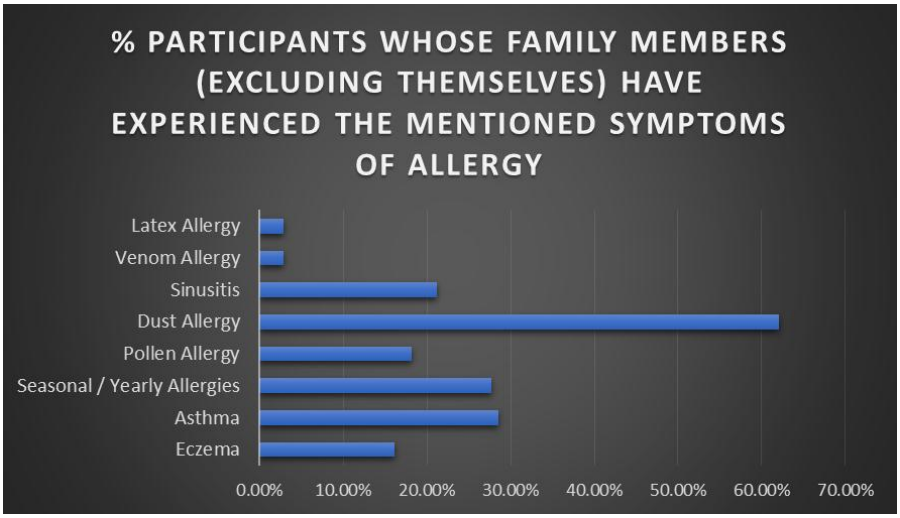

Fig. 16: Participants whose family members (excluding themselves) have experienced the mentioned symptoms of allergy.

Table 10: Participants Allergic to Cosmetics.

Gender	No	Yes	Grand Total
Female	42.22%	14.81%	57.04%
Male	37.78%	5.19%	42.96%
Grand Total	**80.00%**	**20.00%**	**100.00%**

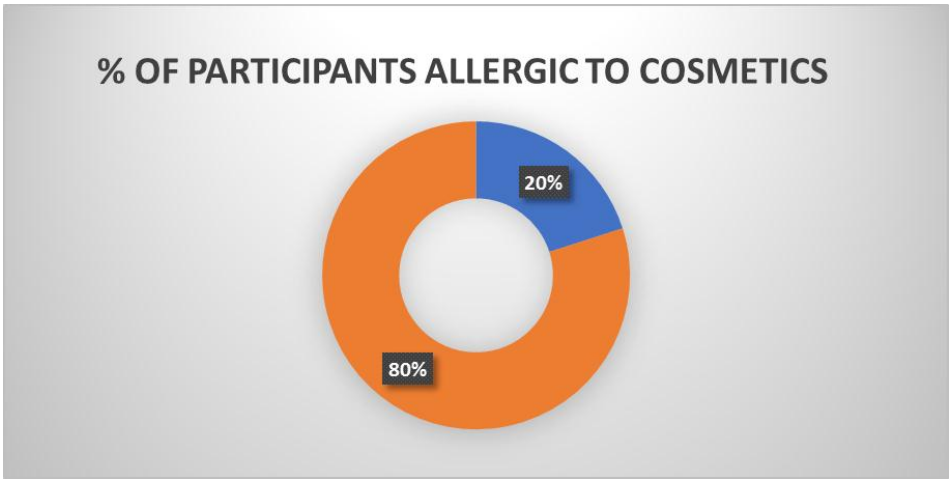

Fig. 17: Participants Allergic to Cosmetics.

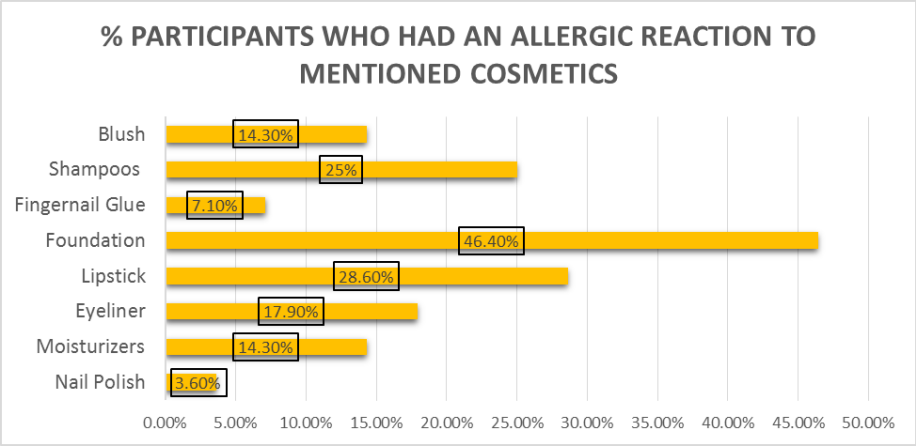

Fig. 18: Participants who had an allergic reaction to mentioned cosmetics.

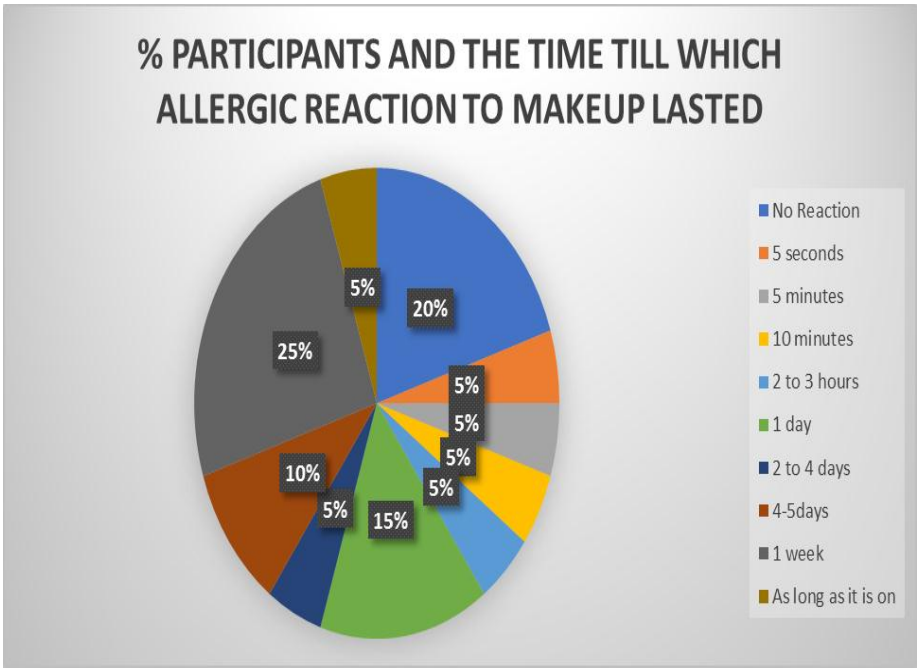

Fig. 19: Participants and the time till which allergic reaction to makeup lasted.

Table 11: Participants bothered by allergy symptoms in past month.

Gender	No	Yes	Grand Total
Female	40.00%	17.04%	57.04%
Male	32.59%	10.37%	42.96%
Grand Total	**72.59%**	**27.41%**	**100.00%**

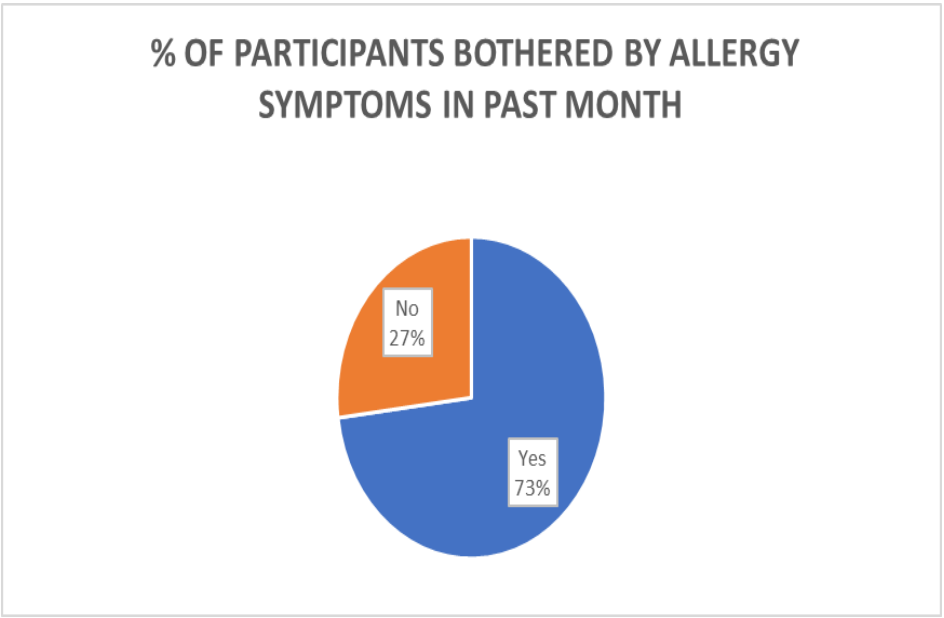

Fig. 20: Participants bothered by allergy symptoms in past month.

Table 12: Rating of allergy symptoms.

Gender	Mild	Not applicable	Severe	Grand Total
Female	32.59%	22.96%	1.48%	57.04%
Male	25.19%	15.56%	2.22%	42.96%
Grand Total	**57.78%**	**38.52%**	**3.70%**	**100.00%**

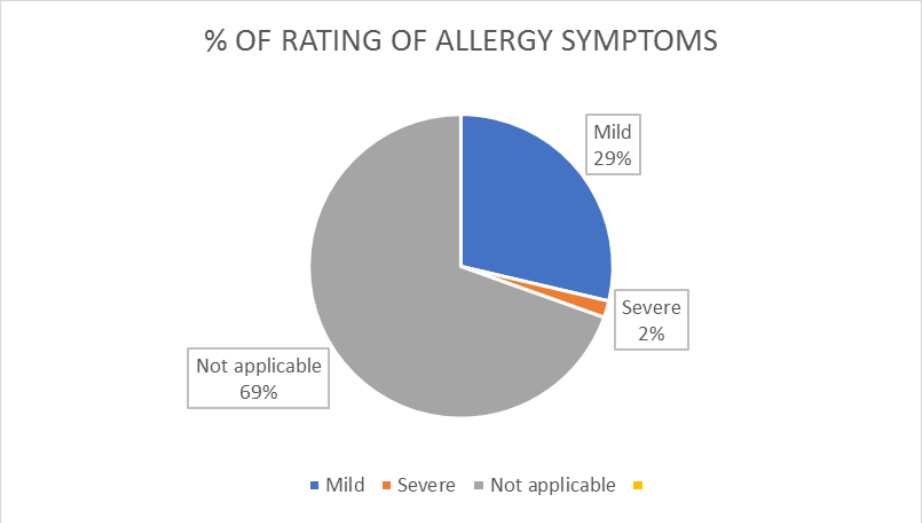

Fig. 21: Rating of allergy symptoms.

Table 13: Participants who took medication advised by doctor for allergy.

Gender	No	Not applicable	Yes	Grand Total
Female	22.96%	20.74%	13.33%	57.04%
Male	14.81%	13.33%	14.81%	42.96%
Grand Total	**37.78%**	**34.07%**	**28.15%**	**100.00%**

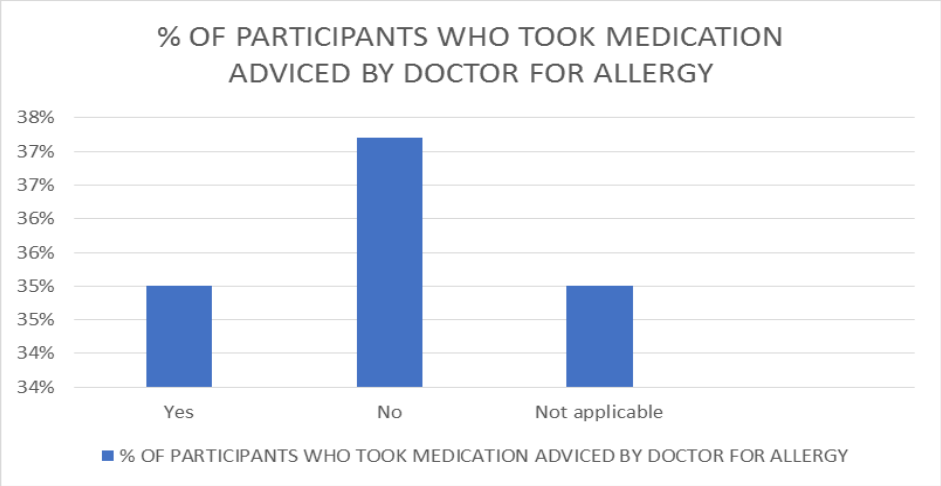

Fig. 22: Participants who took medication advised by doctor for allergy.

Table 15: Participants taking self-medication for allergy.

Gender	No	Not applicable	Yes	Grand Total
Female	34.07%	18.52%	4.44%	57.04%
Male	28.15%	11.85%	2.96%	42.96%
Grand Total	**62.22%**	**30.37%**	**7.41%**	**100.00%**

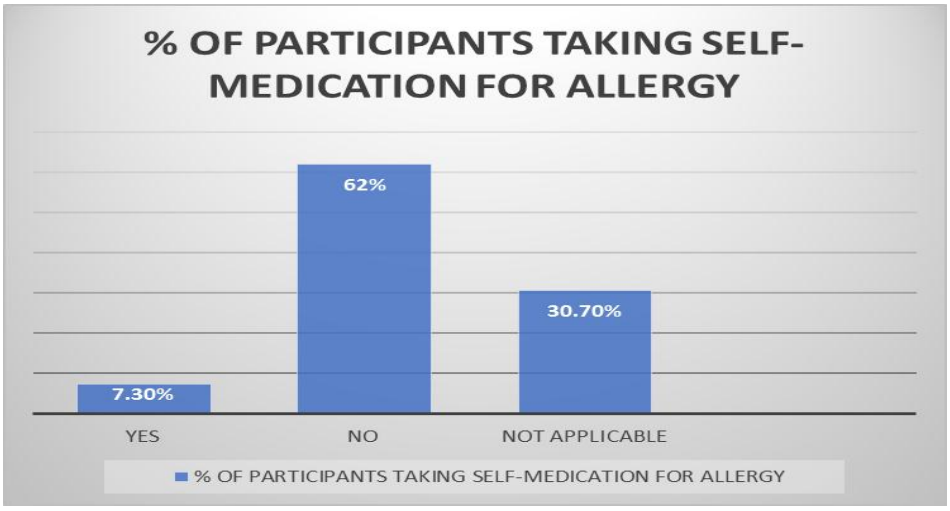

Fig. 23: Participants taking self-medication for allergy.

Table 16: Participants allergic to artificial jewellery.

Gender	No	Yes	Grand Total
Female	55.56%	1.48%	57.04%
Male	40.74%	2.22%	42.96%
Grand Total	**96.30%**	**3.70%**	**100.00%**

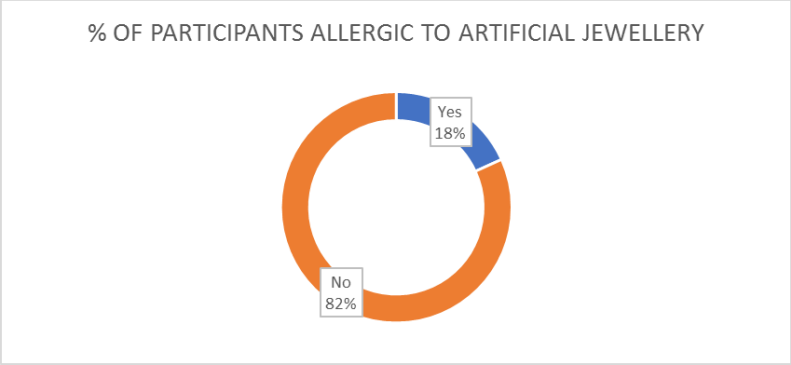

Fig. 24: Participants allergic to artificial jewellery.

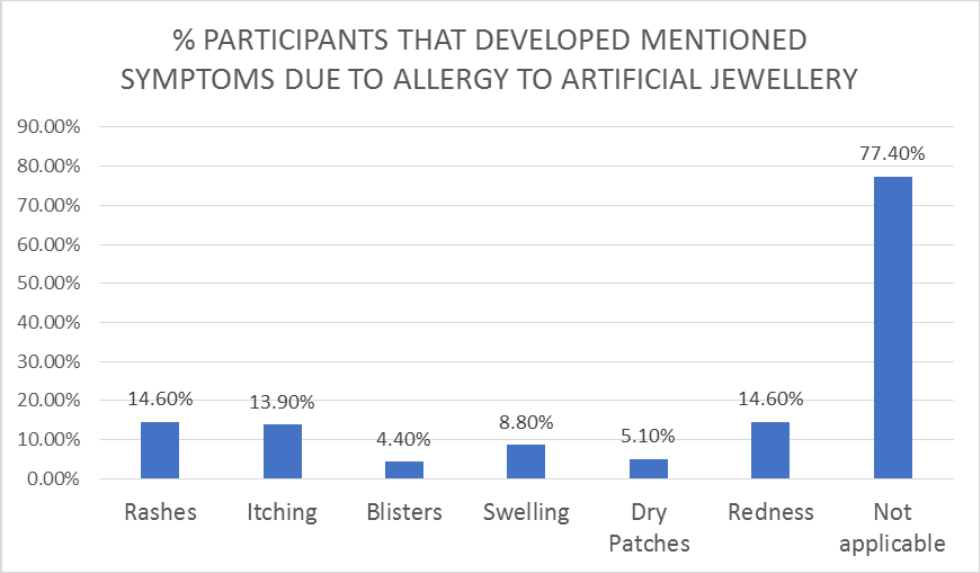

Fig. 25: Participants that developed mentioned symptoms due to allergy to artificial jewellery.

Table 17: Participants who have experienced any allergic reaction to dye.

Gender	No	Yes	Grand Total
Male	36.30%	6.67%	42.96%
Female	51.85%	5.19%	57.04%
Grand Total	**88.15%**	**11.85%**	**100.00%**

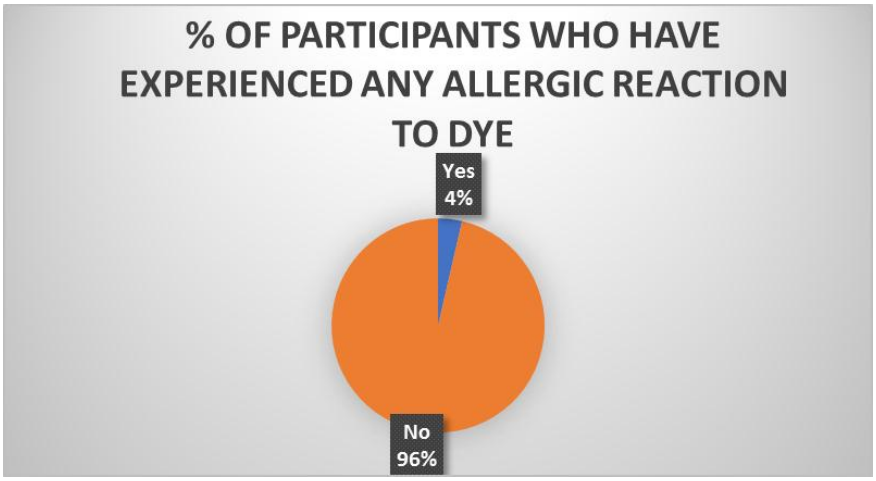

Fig 26: Participants who have experienced any allergic reaction to dye.

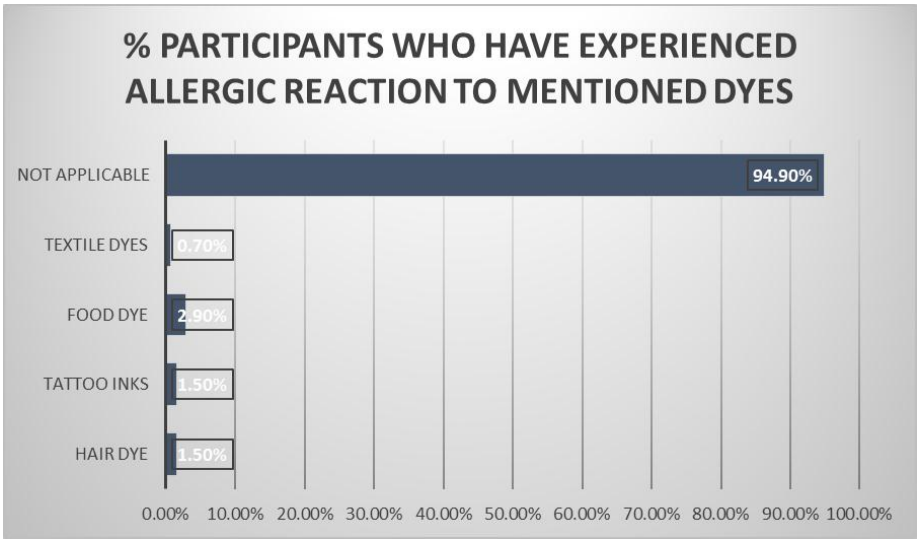

Fig. 27: Participants who have experienced allergic reaction to mentioned dyes

Table 18: Participants who have experienced allergic reaction to clothes.

Gender	No	Yes	Grand Total
Female	49.63%	7.41%	57.04%
Male	38.52%	4.44%	42.96%
Grand Total	**88.15%**	**11.85%**	**100.00%**

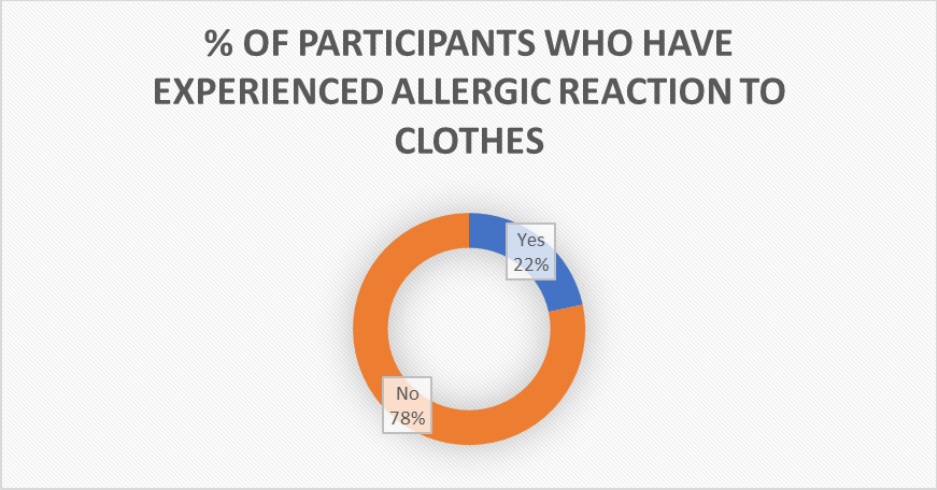

Fig 28: Participants who have experienced allergic reaction to clothes.

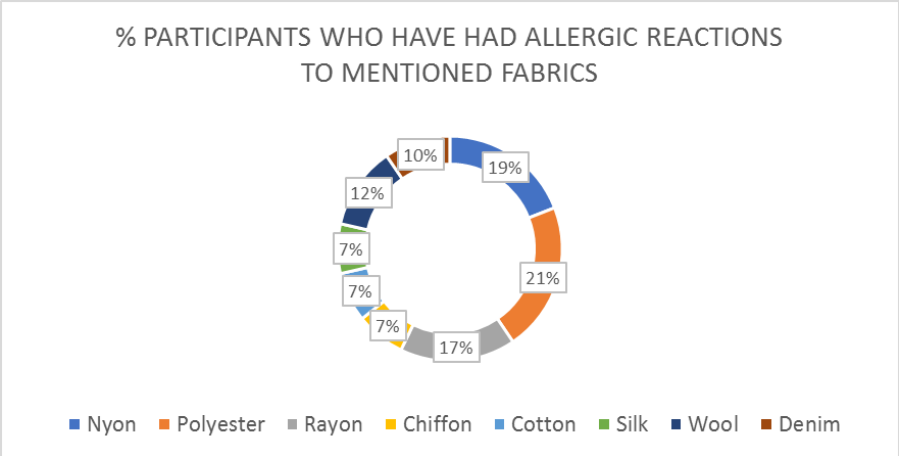

Fig 29: Participants who have had allergic reactions to mentioned fabrics.

Table 19: Participants in whose country allergy is recognised speciality.

Gender	No	Yes	Grand Total
Female	40.74%	16.30%	57.04%
Male	29.63%	13.33%	42.96%
Grand Total	**70.37%**	**29.63%**	**100.00%**

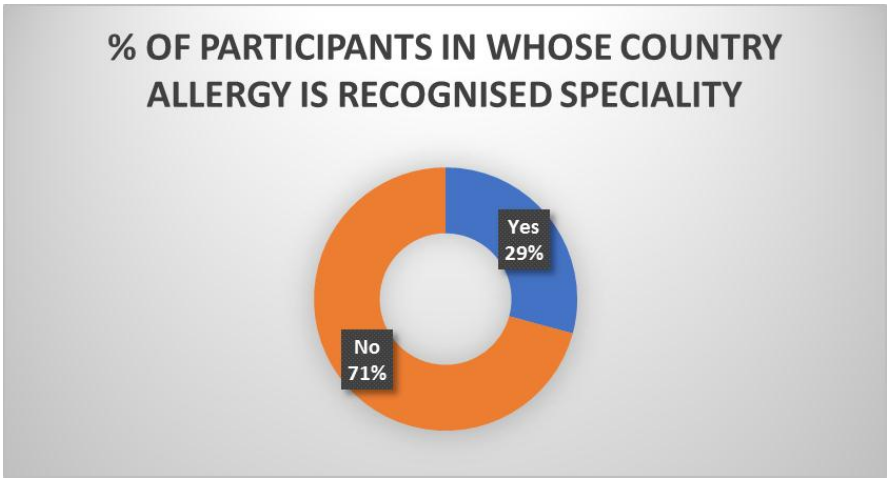

Fig 30: Participants in whose country allergy is recognised speciality.

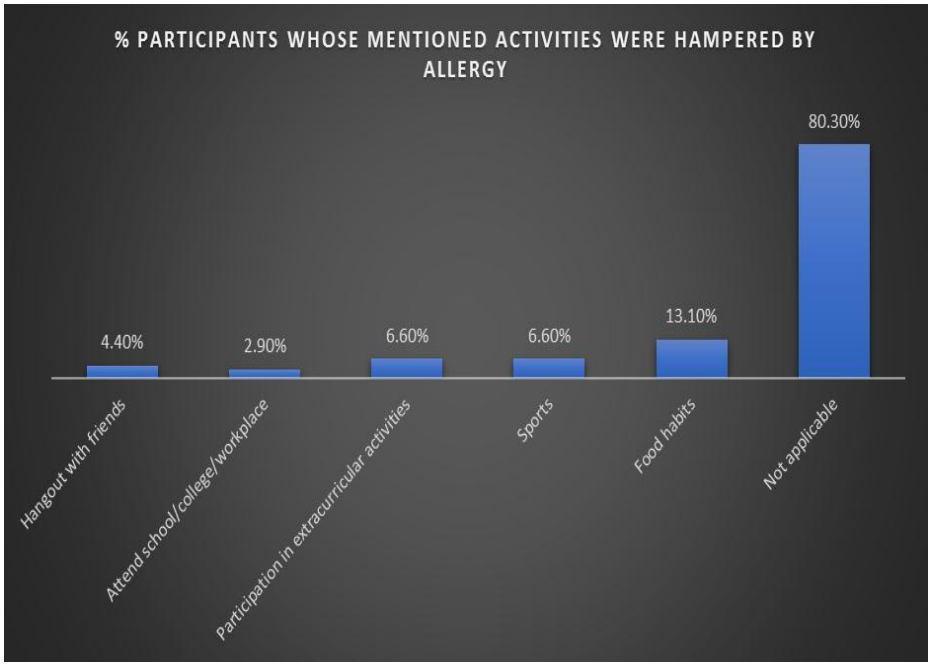

Fig 31: Participants whose mentioned activities were hampered by allergy.

Table 20: Participants who have had their tonsils removed.

Gender	No	Yes	Grand Total
Female	54.07%	2.96%	57.04%
Male	41.48%	1.48%	42.96%
Grand Total	**95.56%**	**4.44%**	**100.00%**

Fig. 32: Participants who have had their tonsils removed.

Table 21: Participants who have undergone ear,nose or sinus surgery.

Gender	No	Yes	Grand Total
Female	53.33%	3.70%	57.04%
Male	38.52%	4.44%	42.96%
Grand Total	**91.85%**	**8.15%**	**100.00%**

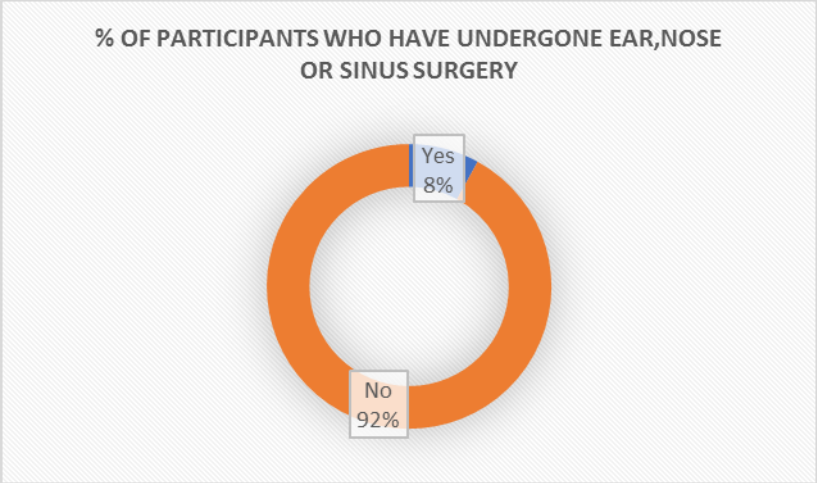

Fig 33: Participants who have undergone ear,nose or sinus surgery.

Table 22: Participants that felt the mentioned emotions while managing their allergy.

Gender	Anxiety	Concerned	Helplessness	Not applicable	Positive	Grand Total
Female	3.70%	5.19%	11.11%	31.85%	5.19%	57.04%
Male	2.96%	7.41%	5.93%	22.22%	4.44%	42.96%
Grand Total	**6.67%**	**12.59%**	**17.04%**	**54.07%**	**9.63%**	**100.00%**

In the study there were total 137 numbers of adult respondents. 56.94% were female & 43.06% were male. 14.07% of female and 12.59% of male were diagnosed for few varieties of allergy. Among the participants 5.19% of female and 6.67% of male were tobacco smokers. The study report of A Lee and others[3] revealed that the use of multiple tobacco products might be a risk factor for asthma, allergic rhinitis and atopic dermatitis. 16.30% of female and 17.04% of male agreed that allergic symptoms are better when they are away from home. JM Wilson and others.[4] revealed that there is evidence of linking dust mites with respiratory disease. D Dey et.al.[5] reported that allergic diseases are developing as one of the major health issues in India. Among the participants 32.59% of female and 20.74% male agreed that allergy can be cured. Ahmed Eelal.[6] reported that the treatment goal is to relieve symptoms and prevent a severe reaction. An G.[7] reported that cosmetics as causes of allergic reactions are increasingly being observed. In the present study 14.81% of female and 5.19% of male revealed that they are allergic to cosmetics. The respondents of this study 1.48% of female and 2.22% of male reported that they have an allergy to artificial jewellery. MH Brandao.[8] reported that metals are the most common contact sensitizers in children and adults. Among the participant 4% of them were allergic to dye and 22% were allergic to clothes. The participants revealed that 2.96% of female and 4.44% of male who had their tonsils removed. Orlands G L and others.[9] reported that tonsil surgery is still one of the most frequent otolaryngological surgeries especially in children and young adults. 8% of the respondents have gone through sinus surgery in the present study. 57.04% female suffered and 42.96% male suffered emotions while managing their allergy. Rasoul NK et.al.[10] reported that allergic rhinitis can adversely affect daily activities in the patients.

CONCLUSION

Allergies involve almost every organ of the body in variable combinations with a broad spectrum of possible symptoms. Despite the availability of effective treatments, factors such as individual beliefs, altitudes, behaviours may contribute to poor adherence to treatment. There is a need to conduct continuous & repetitive education to raise the awareness on allergy and to mitigate the effects of the disease among affected individuals, as well as in the society.

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