Original Article

Influence of Gender and Seasons Variable on Type of Allergy

Wasfi Dhahir Abid Ali

ABSTRACT

Objective: To study the types of allergies and the effect of gender and the season of greatest exposure to allergies.
Study Design: Descriptive (cross-sectional) study
Place and Duration of Study: This study was conducted at the Private Medical Clinics in Basrah City from 1st October 2024 to 1st April 2025.
Methods: Fifty-six patents of allergies in random group of citizens residing in Basrah Governorate, which is located in southern Iraq were enrolled and is characterized by a hot, dry climate in the summer and rainy in the winter.
Results: Most of the allergies were seasonal, with a percentage of 90%. Also, according to gender, males are more than females in allergy (57.2%). More than half of the patients suffer from an allergy in the autumn (54%).
Conclusion: The presence of an effect of the variables of the type of allergy, season, and gender, we found that data, the most common small insects were seasonal insects, and the least common were drug-resistant, with no genetic differences between females.

Key Words: Types, Allergy, Seasons, Gender, Effect

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INTRODUCTION

Allergy sensitization has become much more commonplace worldwide in recent years.[1-3] According to recent data from Australia, this growth may now be levelling out.[4] Childhood exposure to allergens increases the chance of sensitization, and it is widely acknowledged that allergic sensitization is a significant risk factor for allergic diseases.[5-7] Alternatively, it has been proposed that early exposure to allergens may prevent against sensitization and may create tolerance.[8,9] Events in early childhood appear to have a significant influence on the development of tolerance or sensitization.[9-11] However, atopy is also influenced by gender and genetic predisposition in addition to environmental variables.[12,13] Atopy is more common in boys than in girls.[14] Additionally, most writers indicate that men have higher levels of total IgE, specific IgE antibody prevalence, and skin test positive than women, even though this gender difference is less noticeable in adulthood.

Department of Basic Science, College of Nursing, University of Basrah.

Correspondence: Dr. Wasfi Dhahir Abid Ali, Assistant Professor, Department of Basic Science, College of Nursing, University of Basrah.
Contact No: 009647764432506
Email: wasfi.abid_ali@uobasrah.edu.iq

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The term "allergic diseases" refers to immune system hypersensitivity brought on by a variety of environmental causes.[15] Allergy illnesses include hay fever, food allergies, atopic dermatitis, allergic asthma, and anaphylaxis.[16] Pollen and some foods, metals, insect stings, and medications cause allergic reactions[17], resulting in eye congestion, itching, sneezing, and nasal irritation.[18] Heredity, sex, race, and age can be risk factors for allergies.[19] Less-defined factors that contribute to allergies include the living environment, with urban populations being more highly affected than rural populations.[20] Certain trees or grasses pollinate in the spring, summer, or fall, which is when seasonal allergy symptoms are most frequently encountered.[21] A study by Zein[22] found significant disparities between the sexes in terms of allergy incidence, prevalence and severity. Two categories of drug allergies were identified. There are two types of reactions: immediate (occurring within an hour) and delayed (occurring hours to weeks after treatment).[23] Causes the release of both newly generated and preformed mediators and IgE cross-linking.[24]

METHODS

This descriptive (cross-sectional) study was conducted at Private medical clinics in Basrah City from 1st October 2024 to 1st April 2025. A questionnaire was conducted on a random group of citizens residing in Basrah Governorate, which is located in southern Iraq and is characterized by a hot, dry climate in the summer and rainy in the winter. In the Southern Iraqi Basrah Governorate, a sample of male and female volunteers with allergies participated in this study. The questionnaire was created using a Google form and

included questions on gender as well as several items about gender, season, and allergy types to accomplish the study's goal. Version 26 of the Statistical Package for the Social Sciences (SPSS) was used to analyze the data. The information contained Spearman's correlation coefficients, arithmetic means, and percentages.

RESULTS

According to the results of this study, most of the allergies were seasonal, with a percentage of 90%. Also, according to gender, males are more than females in allergy (57.2%). More than half of the patients suffer from an allergy in the autumn (54%). There is a negative relationship between gender and (season and type of allergy). There is a significant positive relationship between the type of allergy and season. There is a negative relationship between season and type of allergy (Tables1-4).

Table No.1: Frequency of genders (n=56)

Gender	No.	%
Male	32	57.2
Female	24	42.8

Table No.2: Frequency of allergy types

Type of allergies	No.	%
Seasonal	45	80.0
Medicine	5	9.0
Food	3	5.0
Rubber	3	5.0

Table No.3: Distribution of allergy regarding seasons

Seasons	No.	%
Winter	6	11.0
summer	12	14.0
spring	8	21.0
Autumn	30	54.0

Table No.4: The correlation between the allergy variables (n=56)

Variable		Types of allergies	Season
Gender	Correlation Coefficient	0.062-	0.057-
	Sig. (P-value)	0.650	0.676
Type of allergy	Correlation Coefficient	-	0.484**
	Sig. (P-value)		0.00
Season	Correlation Coefficient		0.015-
	Sig. (P-value)		0.915

**Correlation is significant at the 0.01 level (2-tailed)

DISCUSSION

Women exhibit a higher prevalence for allergic asthma as compared to men that because According to the data, estrogens improve autoimmunity, immunological humoral responses, and mast cell reactivity. The current study's findings indicated that there were more men than women among the participants,[25] however revealed no discernible variations between the sexes in terms of questionnaire participation. According to a study, males are diagnosed with allergies more often than females, but only in patients under the age of fifteen.[26,27] According to a different study, female teenagers are more likely to get lung allergies and asthma later in life.[28,29] According to a study, the proportion of female patients with medication allergies was roughly 2:1, depending on the type of allergy. This prevalence in comparable populations has also been demonstrated by other investigations.[30,31]

Regarding the type of allergic variable, according to a study, there were roughly twice as many female patients with medication allergies as male patients. This prevalence in comparable populations has also been demonstrated by other investigations.[31,32] Corresponding Seasonal variable, our study showed that autumn is the most severe season for allergic reaction.[15] Trees, grass, and pollen do not release allergens throughout the winter. People who are sensitive to allergens, however, start to react in the spring when everything starts to bloom again, and those allergens are released. Pollens and fungus can be found all year round in some areas.[32] The level of skin reaction appeared in August and September, and it significantly decreased in November and December compared to August and September, according to a study on allergic reactions that examined the relationship between seasonal variation in house dust mite allergen levels in the homes of mite-sensitive asthmatic patients.[33]

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CONCLUSION

The survey participants were less exposed to seasonal allergies than to other types of allergies, such as medications and foods.

Author's Contribution:

Concept & Design or acquisition of analysis or interpretation of data:	Wasfi Dhahir Abid Ali
Drafting or Revising Critically:	Wasfi Dhahir Abid Ali
Final Approval of version:	The above authors
Agreement to accountable for all aspects of work:	The above authors

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