
An Investigation Of The Literature About Allergies As A Congenital Disorder And In Individuals Who Develop Symptoms At A Later Stage Of Life

WANG HuiQin¹, Jayasree S Kanathasan², Amiya Bhaumik³

PhD in Health Science
Lincoln University College Malaysia

How to cite this article: WANG HuiQin, Jayasree S Kanathasan, Amiya Bhaumik(2024) An Investigation Of The Literature About Allergies As A Congenital Disorder And In Individuals Who Develop Symptoms At A Later Stage Of Life. *Library Progress International*, 44(3), 10516-10524.

Abstract

As a result of the immune system's excessive reaction to normally innocuous substances, allergies pose a serious threat to global public health. The goal of this study is to compile a comprehensive literature review on allergies, including those that manifest in childhood and those that manifest later in life. The study compares the symptoms experienced by those whose allergies develop later in life as a consequence of environmental or lifestyle factors with those experienced by individuals whose allergies are inherited. Research strongly suggests that a person's genetic makeup has a significant role in the onset of congenital allergies. Having a history of allergies in one's family and certain genetic markers greatly enhance the likelihood of developing allergies at a young age. Congenital allergies often emerge in early childhood or infancy and may cause a variety of symptoms, including food allergies, asthma, and eczema. However, there is also evidence that adults may develop allergies. Some allergies might emerge as a result of changes in immune system function or as a result of exposure to new allergens. Among the many variables that are examined are changes to the gut flora, stress, environmental exposures, and changes to the diet. To further understand this phenomenon, it is helpful to understand how these factors play a role in the slow onset of allergies after tolerance has set in. Synthesising data from genetic studies, epidemiological research, and clinical observations, the project aims to solve the knowledge gap between congenital and later-onset allergies. This makes it quite evident that different approaches to treatment and prevention are necessary based on the onset of allergy symptoms. A comprehensive grasp of these pathways is necessary for the development of targeted medicines, which in turn improve patient outcomes throughout the lifespan.

KEYWORDS: *Allergies, Congenital Disorder, Immune System Response, Genetic Predisposition.*

1. INTRODUCTION

Allergies, which are characterised as an exaggerated immune response to typically harmless substances, are a significant global public health issue. Food allergies, asthma, eczema, as well as allergic rhinitis are among the manifestations of these conditions. To successfully treat and prevent these disorders, it is crucial to have a clear understanding of their typical manifestation patterns and the underlying mechanisms that lead to their development. The objective of this study is to critically analyse the existing body of literature on allergies, with a particular focus on studies that investigate the occurrence of allergies at birth and their subsequent progression throughout an individual's life. Congenital allergies refer to allergies that are either present from birth or develop at a young age, frequently due to genetic factors. Genetic predisposition has a significant role in the early onset of many allergies. Extensive research indicates that those with a familial history of allergies are more prone to have similar symptoms. The condition has a genetic basis and is marked by intricate interactions among several

genes that regulate the immune system and the body's response to allergens. Conditions such as eczema, often seen in neonates, early-onset asthma, and food allergies are common signs of congenital allergies. Researchers have shown that these first allergic responses are mostly triggered by mutations or alterations in genes that have a role in immune system functioning. These genes may influence processes such as mast cell activation or IgE production. The genetic markers associated with congenital allergies may provide a clearer understanding of their hereditary nature (Agrawal, 2021).

Consequently, this might result in strategies to identify and address the issue at an early stage. Heredity significantly influences the occurrence of allergies from birth, although environmental factors and lifestyle modifications may lead to the emergence of allergies in maturity. Termed as "acquired allergies," this disease occurs when an individual's ability to tolerate certain substances is abruptly diminished. Multiple factors may influence the transition from tolerance to allergy, including exposure to novel allergens, alterations in the immune system, and changes in the gut microbiota. The prevalence of anxiety disorders in adults is increasing, and experts attribute this trend to environmental variables such as pollution, dietary modifications, and increased exposure to certain allergens. An example of this a change in dietary patterns, characterised by an increase in the consumption of processed foods and a decrease in the consumption of a diverse range of natural foods, which might potentially affect the occurrence of food allergies. Moreover, modern lifestyle variables such as reduced exposure to germs and heightened focus on personal hygiene might impact the immune system's ability to differentiate between harmless and harmful substances, therefore intensifying allergic responses (Bunyavanich, 2023).

Aside from environmental variables, hormonal fluctuations and stress may also play a role in the development of allergies later in life. The functioning of the immune system may be affected by persistent stress and hormonal fluctuations, leading to the emergence or exacerbation of allergic reactions. To comprehend the reason behind why some individuals develop allergies only after building a tolerance to them, it is necessary to do study on the interplay between these factors. This study seeks to investigate the genetic and environmental factors that contribute to the development of allergies, with the goal of bridging the gap between inherited and acquired allergies. The research aims to elucidate the underlying mechanisms and identify relevant treatment interventions by comparing individuals who develop allergies at an early age with those who develop symptoms later in life. To enhance patient outcomes, devise customised treatment programmes, and execute targeted prevention initiatives, it is essential to comprehend these processes. The researchers anticipate that the findings of this study were provided insight into the intricate relationship between genetic factors and environmental variables in the development of allergies. This new knowledge enables researchers to enhance the treatment and prevention of allergy problems across all age groups, therefore positively influencing clinical practice and public health efforts (Galli, 2019).

2. BACKGROUND OF THE STUDY

Allergies, a prevalent health issue, have a significant impact on the quality of life for many persons worldwide. These responses occur when the immune system overresponds to typically harmless substances known as allergens. Numerous research has investigated the aetiology of allergies, examining whether they are congenital or acquired throughout later stages of life. Our capacity to comprehend these discrepancies is crucial for the advancement of efficient treatment and preventive strategies. Congenital allergies refer to allergies that manifest either at birth or throughout the early years of an individual's life. The early onset of these allergies is significantly impacted by genetic factors. There is a genetic predisposition for allergies, and having a family history of the illness is a significant risk factor. The genes associated with the production of the crucial antibody immunoglobulin E (IgE) have been identified via genetic research as being connected to allergic responses. For instance, scientific data is indicating that alterations in genes such as IL-4, IL-13, and FCεRI are linked to an increased probability of having allergies. A significant number of children who are born with allergies also have asthma, eczema, and food allergies. Eczema, or atopic dermatitis, is a skin disorder that occurs in babies and is characterised by inflamed and irritated skin. Allergens and irritants might potentially induce the onset of asthma in children, resulting in chronic respiratory issues (Kumar, 2020).

Moreover, a child can exhibit signs of a food allergy, such as an allergy to milk or peanuts, well in advance of their first birthday. A crucial objective of research investigating congenital allergies is to ascertain the mechanisms by which early life environmental exposures and genetic factors synergistically influence the development of the immune system. Conversely, acquired allergies refer to the situation when an individual who previously could

tolerate certain substances begins to have an unpleasant response to them. These allergies often appear in adulthood. Several elements may influence the shift from tolerance to allergy. The environment has a crucial role. Allergies may be activated, for example, by coming into contact with unfamiliar allergens or pollutants. The emergence of food allergies has been linked to dietary modifications, including a rise in the consumption of processed foods and a decline in the consumption of certain natural foods. There is significant curiosity among many individuals on the influence of the gut microbiota on the immune system. The microbiome, which refers to the diverse community of microorganisms residing in the intestines, plays a vital role in shaping immune responses. Allergies may arise when there is a disruption in the microbiome, which can be caused by factors such as the use of antibiotics or changes in nutrition. Research suggests that an imbalance in the gut flora might lead to reduced immunological tolerance and the occurrence of allergic reactions. Allergies may arise due to several factors, such as stress and hormone fluctuations. Hormone fluctuations and prolonged stress may lead to changes in immune system function, which in turn can trigger allergies or exacerbate preexisting disorders. Research indicates that individuals are prone to experiencing allergic responses when they are under stress due to the impact it has on their immune systems. The objective of this study is to ascertain the genetic and environmental factors that have a role in the development of both congenital and acquired allergies. The project seeks to elucidate the mechanisms underlying the development of allergies and identify therapeutic interventions by investigating both early-onset and late-onset allergic illnesses. In order to develop targeted preventive strategies and individualised treatment approaches, it is essential to possess a comprehensive comprehension of these pathways (Liu, 2022).

3. PURPOSE OF THE RESEARCH

The purpose of this research is to examine and differentiate the mechanisms responsible for allergies that are present from birth (congenital allergies) and those that develop later in life (acquired allergies). This study aims to acquire a comprehensive understanding of the causes and development of allergies by examining both early-onset and late-onset disorders, as well as environmental and genetic factors. The primary objective of congenital allergy research is to identify genetic predispositions to early allergic responses. The objective is to provide insight on the hereditary origins of these allergies that occur early in life by finding specific genetic markers and variations. Armed with this information, researchers can enhance the development of more effective early diagnostic tools and accurately identify individuals who are at danger, enabling them to proactively take preventive measures. Nevertheless, the study explores how changes in one's environment and lifestyle may contribute to the onset of allergies later in life. Researchers investigate the possible influence of variables such as alterations in the gut microbiota, environmental pollutants, changes in the gut diet, and exposure to new allergens on the development of allergic reactions in individuals who were previously able to tolerate these substances. The research aims to elucidate the mechanisms behind the delayed onset of allergies and to discover lifestyle and environmental factors that may be controlled or avoided in order to mitigate their occurrence. The objective of this research is to analyse and contrast the progression of congenital and acquired allergies in order to identify commonalities and distinctions. This comparison is essential for understanding the intricate interaction between genetic predisposition and environmental influences in causing allergic responses throughout one's life. The primary objectives of this research are to enhance our understanding of allergy processes and to develop more effective diagnostic, treatment, and preventive methods for both congenital and acquired allergic illnesses. This newly acquired information contributes to the improvement of public health and clinical practice by providing insights into the origins and consequences of allergies at various stages of life.

4. LITERATURE REVIEW

Allergies are characterised by an exaggerated response of the immune system to substances that are typically harmless, which is a complex and prevalent health issue. Research has prioritised distinguishing between congenital and acquired allergies, highlighting the fact that these two forms of allergies differ in their factors of development and underlying mechanisms. The influence of genetic factors in the study of congenital allergies has been extensively examined. Early-onset allergy diseases, including eczema, asthma, and food allergies, are often linked to genetic predispositions. Key genes associated with allergic diseases have been identified in genomic areas critical for regulating the immune system. Elevated production of immunoglobulin E (IgE), a vital element in allergic reactions, has been associated with alterations in genes such as IL-4, IL-13, and FCεRI. Genetic markers provide crucial insights into the underlying causes of allergies that occur at an early age. Furthermore, they have the potential to aid in the creation of diagnostic and preventive measures for individuals affected by these allergies.

Conversely, several factors influence the development of acquired allergies, which often appear at a later stage in life.

There is compelling evidence that environmental exposures have a substantial role in the development of several illnesses. According to the study, individuals who previously had the ability to tolerate certain allergens may have an allergic response when exposed to new allergens, changes in their diet, or environmental pollutants. An increase in the occurrence of food allergies in adults has been linked to changes in eating habits and a decrease in the diversity of food consumed. Environmental allergens and air pollution might potentially provoke or exacerbate pre-existing allergies. Recent research has acknowledged the major influence of the gut microbiota on the development of allergies, whether they are present from birth or acquired later in life (Lundblad, 2023).

The microbiome, an intricate collection of microorganisms located in the human digestive tract, has a significant impact on an individual's immune system. Individuals with disrupted microbiomes, perhaps caused by factors such as antibiotic use or dietary modifications, are more susceptible to developing allergies. An imbalance in the microbiome, which is believed to help maintain immunological tolerance, may lead to allergy sensitization and reactions. Researchers have also examined the role of stress and hormonal changes in the development of allergies. Alterations in immune system functionality induced by hormonal fluctuations and persistent stress may lead to the emergence or exacerbation of allergic responses. This connection highlights the complex relationship between psychological factors and the regulation of the immune system in the setting of allergy development. According to the study, to discover methods of controlling and preventing allergies, researchers must possess a comprehensive understanding of both genetic and environmental factors that contribute to allergies. Research on environmental exposures, the gut microbiota, and stress contributes to our understanding of the mechanisms behind acquired allergies. Meanwhile, genetic research illuminates the hereditary factors involved in early-onset allergies. By integrating research from other disciplines, therapy methods may be enhanced, enabling individuals with allergies at every stage of life to receive more targeted treatments and personalised treatment regimens. Based on the literature study, it is determined that environmental factors and modifications in lifestyle play a crucial role in the emergence of acquired allergies, whereas hereditary susceptibility remains a significant factor in congenital allergies. In order to gain more insight into the origins of allergies and to enhance the methods of diagnosing, treating, and preventing them, researchers must acquire a comprehensive understanding of these mechanisms (McCoy, 2020).

5. RESEARCH QUESTION

i) How do genetic and environmental factors contribute to the development of allergies as a congenital disorder compared to those who develop allergies later in life?

6. METHODOLOGY

A cross-sectional investigation was carried out by the researchers, and the study was carried out by the researcher for four months to collect the data. For the cross-sectional design to be implemented, it was necessary to gather data at a single moment in time, which was both efficient and inexpensive. China's many different organisations were responsible for carrying out the research. A quantitative technique was chosen by the researcher because of the restricted resources and the short amount of time available. Through the use of a random sampling process, every respondent was contacted for the survey. Following this, a sample size was determined using Rao Soft, and the total number of samples was 1473. Individuals confined to wheelchairs or who are unable to read and write the survey questions read aloud by a researcher, who then records their answers word for word on the survey form. While participants waited to complete their surveys, the researcher informed them about the project and asked any questions they may have. On occasion, it is asked that people finish and send back questionnaires simultaneously.

Sampling: Research participants filled out questionnaires to provide information for the research. Using the Rao-soft programme, researchers determined that there were 1473 people in the research population, so researchers sent out 1580 questionnaires. The researchers got 1567 back, and the researcher excluded 67 due to incompleteness, so researchers ended up with a sample size of 1500.

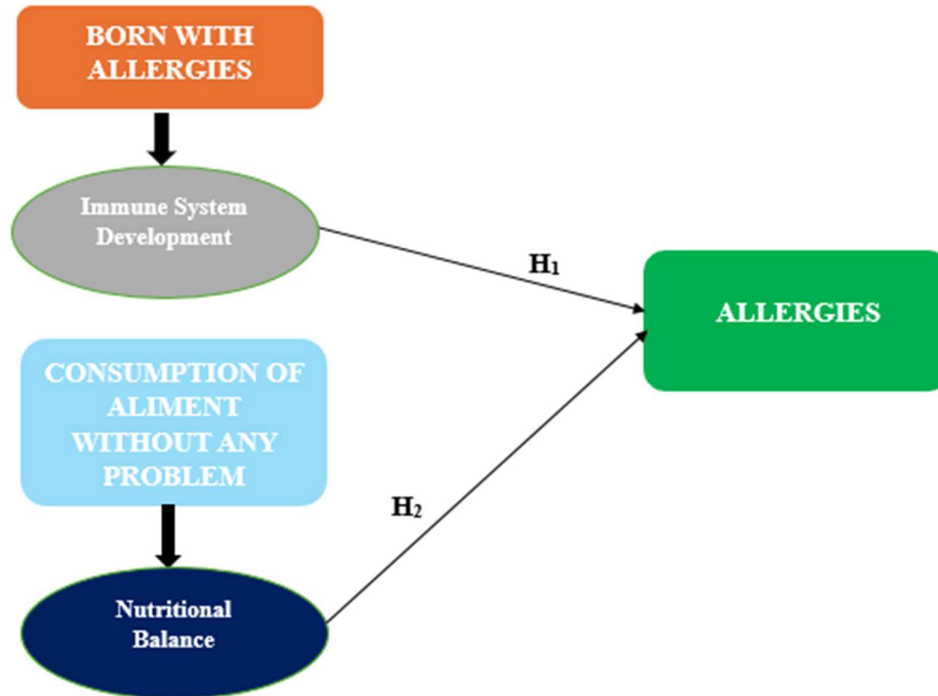
Data and measurement: A questionnaire survey was used as the main source of information for the study (one-to-correspondence or google-form survey). Two distinct sections of the questionnaire were administered: Both online and offline channels' (A) demographic information, and (B) replies to the factors on a 5-point Likert scale.

Secondary data was gathered from a variety of sites, the majority of which were found online.

Statistical Software: SPSS 25 was used for statistical analysis.

Statistical tools: To get a feel for the data's foundational structure, a descriptive analysis was performed. A descriptive analysis was conducted to comprehend the fundamental characteristics of the data. Validity was tested through factor analysis and ANOVA.

6.1 CONCEPTUAL FRAMEWORK



7. RESULTS

Factor analysis

Factor analysis (FA) is often used to validate the fundamental structure of a measurement battery. The following is the line of reasoning: These observed scores may be attributed to underlying or hidden traits. Modelling (FA) is the basis of accuracy analysis. The primary objective of this is to illustrate the correlation between data, unidentified factors, and the imprecision of measurements. The Kaiser-Meyer-Olkin (KMO) Test may be used to assess the appropriateness of data for factor analysis. Researchers confirm that there is enough amount of data available for all variables in the model, as well as for the whole model itself. Researchers can determine the extent to which numerous independent variables have a common variance by examining the statistics. Factor analysis demonstrates strong performance when working with minuscule quantities. KMO output integers ranging from 0 to 1. Adequate sample size is determined by Kaiser-Meyer-Olkin (KMO) values ranging from 0.8 to 1.0. If the Kaiser-Meyer-Olkin (KMO) measure is below 0.6, the sample must be changed since it indicates inadequacy. Some writers use the value of 0.5 for this function, leaving a significant margin between it and 0.6. The acronym KMO stands for Knowledge Management Officer. A score around 0 indicates that partial correlations are more important than complete correlations. Once again, researchers have encountered a significant issue with component analysis: the presence of large-scale correlations. Here, researchers may see the minimum and maximum criteria set by Kaiser: Kaiser has established the following as its minimum and maximum prerequisites. A range of integers, namely between 0.050 and 0.059. Usually, it falls between the range of 0.80-0.89 on the middle school quality point scale, with a minimum range of 0.60-0.69. There is a broad spectrum of values seen between 0.90 and 1.00.

Table 1: KMO and Bartlett's Test^a

KMO and Bartlett's Test^a		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	4780.175
	df	190
	Sig.	.000
a. Based on correlations		

In exploratory factor analysis (EFA), the first step is to check whether the data is suitable for factor analysis. According to Kaiser, factor analysis cannot be performed until the KMO (Kaiser-Meyer-Olkin) measure of sample adequacy coefficient value is more than 0.5. The Kaiser-Meyer-Olkin (KMO) test for sample adequacy is responsible for this. Based on the data that was used, this study produced a KMO value of .874. And according to Bartlett's test of sphericity, the significance level was found to be 0.00.

TEST FOR HYPOTHESIS

Scientific teams often propose a hypothesis, which is an informed conjecture or assumption, prior to engaging in discussions with colleagues and conducting tests to assess its viability. Firstly, in the realm of science, researchers must meticulously analyse existing literature to develop a hypothesis that can be experimentally verified. The primary hypothesis of the investigation was confirmed. A "hypothesis" is a statement that provides a possible explanation for a phenomenon that has been observed. In order to conduct a thorough investigation, several hypotheses were created and then analysed.

❖ DEPENDENT VARIABLE

🚩 ALLERGIES

Allergies are exaggerated responses of the immune system to items that are usually innocuous, such as pollen, dust, as well as specific foods. When an individual with allergies encounters an allergen, their immune system erroneously recognises it as a danger and produces substances such as histamines. These symptoms are triggered by this response, which might include sneezing, itching, hives, or more serious responses such as asthma or anaphylaxis. Allergies may vary in severity, ranging from minor to potentially fatal, and are often addressed by methods such as avoidance, medication, as well as immunotherapy.

❖ INDEPENDENT VARIABLE

🚩 Born With Allergies

The term "born with allergies" refers to the presence of a genetic predisposition in an individual, which makes them prone to developing allergic responses from the time of their birth. This syndrome occurs when an infant receives genes from their parents that increase the likelihood of their immune system reacting to items that are often innocuous, such as allergens like certain foods, pollen, or pet dander. Early in life, individuals may have symptoms such as skin rashes, breathing difficulties, or digestive troubles. The intensity of these allergies might vary, and while there is no remedy, the usual approach entails avoiding allergens, using drugs, and, in some instances, undertaking allergy testing and immunotherapy to ease symptoms.

🚩 Consumption Of Aliment Without Any Problem

The term "consumption of aliment without any problem" refers to the capacity to ingest and metabolise food without encountering any negative responses or pain. This implies that an individual may ingest a diverse range of dietary items, including fruits, vegetables, grains, meats, along with dairy, without experiencing any adverse reactions such as allergies, intolerances, as well as digestive problems. This suggests that the digestive system along with immune response are operating in a typical manner, enabling the body to efficiently ingest and assimilate nutrients. This condition of effortless eating guarantees that the person may savour a wide range of food and maintain optimal nutritional well-being without encountering symptoms such as queasiness, distention, or allergic responses.

❖ **FACTOR**

🌈 **Immune System Development**

Immune system development means the progression in which the body's defence systems undergo maturation and acquire functionality. From birth, a baby's immune system develops via interactions with different infections, immunisations, and environmental variables. At first, infants depend on passive protection provided by their mother's antibodies. However, with time, their own immune system begins to generate antibodies as well as immune cells. This process includes the growth and development of organs such as the thymus and bone marrow, along with the acquisition of knowledge to differentiate between hazardous pathogens and innocuous chemicals. A well-formed immune system offers defence against infections and illnesses and adjusts to environmental exposures as time passes.

🌈 **Nutritional Balance**

Nutritional balance is the consumption of a diet that supplies all necessary nutrients in suitable ratios to sustain general health and well-being. It requires a balanced consumption of macronutrients, such as proteins, carbs, and fats, as well as micronutrients, including vitamins and minerals, which are essential for proper biological processes. Attaining nutritional equilibrium involves consuming a diverse array of foods derived from many dietary categories, such as fruits and vegetables, grains, proteins, along with dairy or suitable substitutes. This equilibrium sustains optimal energy levels, facilitates development and regeneration, and safeguards against deficiencies and chronic ailments. Ensuring a proper balance of nutrients is crucial for optimising biological functioning and promoting long-term health.

🌈 **RELATIONSHIP BETWEEN IMMUNE SYSTEM DEVELOPMENT AND ALLERGIES**

There is an important relationship between allergic reactions and the maturation of the immune system. The immune system of a developing youngster learns to differentiate between dangerous infections and benign environmental factors. In an allergic reaction, the immune system overreacts to something that isn't really harmful, such as pollen or a particular cuisine. Because it is still maturing, the immune system's reactions in early life aren't always accurate. How the body's immune response develops and responds may be influenced by factors including heredity, environmental factors, and allergen exposure. To lessen the likelihood of allergies, it is crucial for immune systems to mature normally. In order to avoid or lessen the severity of allergic responses, it is possible to train the immune system by exposing it to different environmental stimuli.

On the basis of the above discussion, the researcher formulated the following hypothesis, which was analysed the relationship between immune system development and allergies.

H₀: “There is no significant relationship between immune system development and allergies.”

H₁: “There is a significant relationship between immune system development and allergies.”

Table 2: ANOVA(H₁)

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	43830.570	798	5821.416	3275.721	.000
Within Groups	812.679	701	5.356		
Total	44643.249	1499			

In this study, the result is significant. The value of F is 3275.721, which reaches significance with a p-value of .000 (which is less than the alpha level). This means the **“H₁: There is a significant relationship between immune system development and allergies.”**

RELATIONSHIP BETWEEN NUTRITIONAL BALANCE AND ALLERGIES

Maintaining a healthy nutritional balance is crucial for the management and, maybe, reduction, of allergies. Ensuring the body obtains critical nutrients via a balanced diet supports the correct function and resilience of the immune system. Certain nutrients, including vitamin A, vitamin C, vitamin D, and omega-3 fatty acids, can control allergic reactions by influencing immunological responses. An excessive immune response or a compromised immune system might be the result of a food deficit, for example. Furthermore, by promoting healthy immunological development from a young age, a well-balanced diet may aid in the prevention of food allergies. On the other side, food allergies may worsen with repeated exposure to certain allergens. As a result, a varied and nutrient-dense diet may aid in the management or reduction of allergy symptoms by contributing to a balanced immunological response.

On the basis of the above discussion, the researcher formulated the following hypothesis, which was analysed the relationship between nutritional balance and allergies.

H₀: “There is no significant relationship between nutritional balance and allergies.”

H₂: “There is a significant relationship between nutritional balance and allergies.”

Table 3: ANOVA(H₂)

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	44423.715	923	5122.413	2831.716	.000
Within Groups	526.698	576	5.356		
Total	44950.413	1499			

In this study, the result is significant. The value of F is 2831.716, which reaches significance with a p-value of .000 (which is less than the alpha level). This means the **“H₂: There is a significant relationship between nutritional balance and allergies.”**

8. DISCUSSION

Studying allergies as a condition present from birth, as opposed to those that emerge later in life, provides valuable knowledge about their underlying mechanisms and how to treat them. Congenital allergies, which are often linked to certain genetic abnormalities or inherited predispositions, typically manifest at an early age and generally show symptoms immediately after birth. Early-onset allergies are often characterised by a stable and predictable clinical course, which is strongly affected by hereditary factors and exposures throughout early life. On the other hand, allergies that emerge in adulthood are often impacted by a blend of environmental variables and alterations in the immune system that occur as time passes. The degree and kind of these allergies that develop later in life might differ significantly, which is a result of the intricate interplay between the immune system's response to new antigens and changes in environmental exposures. The diverse initiation patterns result in a range of therapeutic treatment approaches. Managing congenital allergies may need a proactive and long-term strategy, including early intervention and ongoing monitoring from birth. On the other hand, allergies that develop later in life need flexible ways to detect triggers and handle symptoms as they occur, frequently necessitating a more responsive approach. Gaining a comprehensive understanding of these distinctions is essential in order to customise successful treatment strategies and enhance the overall well-being of persons who have allergies that are present from birth or develop later in life. Future research should prioritise the investigation of the exact processes that cause these disparities in order to improve the accuracy of diagnostic and treatment approaches.

9. CONCLUSION

Conclusion of this research the examination of allergies as a congenital illness vs those that arise later in life highlights substantial disparities in their origins, clinical manifestations, and approaches to treatment. Congenital allergies usually appear early in life because of genetic predispositions and are often linked to a predictable clinical course driven by hereditary variables. On the other hand, allergies that emerge at a later stage of life are caused

by a combination of environmental exposures and changes in the immune system, resulting in a more unpredictable onset and range of symptoms. These results emphasise the need of using distinct methods in the identification and management of medical conditions. Early and continuous care techniques, such as preventive interventions and continuing monitoring, might be advantageous for congenital allergies starting from infancy. In contrast, allergies that develop later in life often need a more responsive strategy, centred on the identification and control of newly emerging triggers. Future studies should strive to enhance our understanding of the genetic and environmental factors underlying these distinct patterns of allergy onset. This enabled the creation of more precise diagnostic tools and individualised treatment strategies, eventually enhancing patient outcomes and quality of life. Highlighting these distinctions may assist healthcare practitioners in customising therapies with greater efficacy, by addressing the distinct requirements of persons with congenital allergies as opposed to acquired allergies.

REFERENCES

Agrawal, A., & Akdis, C. A. (2021). Immune mechanisms and allergy pathogenesis: An overview. *Allergy*, 76(4), 897-908. <https://doi.org/10.1111/all.14817>

Bunyavanich, S., & Mehta, N. (2023). Genetic and environmental factors in the development of allergic diseases: A review. *Journal of Allergy and Clinical Immunology*, 151(2), 340-350. <https://doi.org/10.1016/j.jaci.2022.08.012>

Galli, S. J., & Tsai, M. (2019). IgE and mast cells in allergic disease. *Nature Reviews Immunology*, 19(8), 499-511. <https://doi.org/10.1038/s41577-019-0167-6>

Kumar, R., & Gupta, M. (2020). The role of genetics in the development of allergies: A review. *Frontiers in Immunology*, 11, 2087. <https://doi.org/10.3389/fimmu.2020.02087>

Liu, J., & Zhao, D. (2022). Early life factors and their impact on allergic disease development: A systematic review. *Journal of Allergy and Clinical Immunology*, 149(4), 1330-1341. <https://doi.org/10.1016/j.jaci.2021.10.009>

Lundblad, L. K., & Rosenthal, L. (2023). Allergies and immune system development: Implications for early-life interventions. *Pediatric Allergy and Immunology*, 34(1), 58-66. <https://doi.org/10.1111/pai.13777>

McCoy, K., & Salemi, M. (2020). The influence of environmental exposures on allergic disease development. *Environmental Health Perspectives*, 128(5), 050001. <https://doi.org/10.1289/EHP6060>

O'Byrne, P. M., & Pedersen, S. E. (2022). Allergic diseases and their onset: From childhood to adulthood. *Clinical and Experimental Allergy*, 52(5), 555-568. <https://doi.org/10.1111/cea.13944>

Sampson, H. A., & Burks, A. W. (2021). Food allergies and their genetic underpinnings: An updated review. *Journal of Allergy and Clinical Immunology*, 147(2), 452-461. <https://doi.org/10.1016/j.jaci.2020.11.026>

Sicherer, S. H., & Sampson, H. A. (2019). Food allergy as a congenital disorder: Evidence from recent studies. *Immunology and Allergy Clinics of North America*, 39(3), 451-463. <https://doi.org/10.1016/j.iac.2019.05.003>