

# Patterns of Diseases among Children's Pilgrims during Arba'een of Imam Hussein in Holy Kerbala City

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## **Abstract:**

**Background:** Arba'een is the biggest annual pilgrimage around the world, in which millions of Muslim's pilgrims are gathering in kerbala city, at the Holly Shrine of Imam Hussain. During Arba'een of Imam Hussein there is a lot of children came to Karbala with their families. There are many pediatric diseases associated with travel or mass gathering, the risks that children face while travelling they are likely similar to their parents face. During the Arba'een of Imam Hussein there is no formal statistics or report about the common illness among children's pilgrims in Karbala city. This study was focusing on the common diseases among children's pilgrims attending to Holy Karbala at Arba'een of Imam Hussain.

**Objectives:** The aims of the present study was to assess the common diseases among children's pilgrim attending to Holy Kerbala during Arba'een of Imam Hussein, and to find out the relationships between socio-demographic variables such as child's age, gender, and nationality with their diseases.

**Methodology:** Quantitative cross-sectional study, conducted at three pediatric clinics from the period of 12<sup>th</sup> to 20<sup>th</sup> of Safar 1440 (22<sup>th</sup>-30<sup>th</sup> October 2018). A non-probability (convenience) sample consists of 350 children, ages 1-12 years came with their families to Holy Karbala city to participate in the Arba'een of Imam Hussein from Iraq and different countries were involved in this study.

**Results:** The results of the present study indicate that the majority (77.1%), and (19.9%) of children pilgrims were from Iraq and Iran respectively, and more than one half (54.3%) of them have respiratory disorders.

**Recommendations:** The researchers recommended the need for construct and apply a special instructional program for pilgrims about primary prevention of common diseases among children during Arba'een of Imam Hussain.

**Conclusion:** Upper respiratory tract infection is the most common health problem among children pilgrims attending to Holy Kerbala in Arba'een of Imam Hussain.

**Keywords:** Diseases, children's pilgrims, Arbaeen of Imam Hussein.

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## **Introduction:**

Arba'een is the biggest annual pilgrimage around the world, in which 19-22 millions of Muslim's pilgrims from all Iraq cities and other nationality gathering in kerbala city, at the Holly Shrine of Imam Hussain (1). This pilgrimage is not as the Muslim's Hajj in Mecca or the Hindu Kumbh Mela, it is identified as Arba'een, the event memorializes the martyrdom of Imam Hussein bin Ali, the grandson of the Prophet Muhammad. Which marks the end of the 40<sup>th</sup> days period of grief after the martyrdom of Imam Hussein's, it is well-known as one of the biggest religious mass gatherings globally, approximately 60 nationalities participated in this religious mass gathering annually (2).

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A pilgrim refer to people who travels to a holy place as an act of religious, it is a trip to a shrine or other location related to a person's faith and beliefs, many religions assign spiritual meaning to specific places (3, 4). In the Islamic Hajj pilgrimage to Mecca arrive about 2 millions of pilgrims annually. While, in the Hindu mass gathering of Kumbh Mela, often sees extra pilgrims but is only occur every three year (5). In Arba'een ritual, millions of Muslims pilgrims travel hundred miles on foot or even by car to reach the Holy Karbala city in Iraq, also referred to as Karbal' Al-Muqaddasah, approximately 100 km south-west of Baghdad (2, 6).



**The**  
**huge numbers of pilgrimage near to Imam Hussein shrine**

Year by year the numbers of Arba'een pilgrims was increase and the crowds of this religious mass gathering are so huge. It is difficult to raise the proficiency of health care services in Holy Karbala specifically, and in all Iraqi cities as general (7). During Arba'een of Imam Hussein there is a lot of children came to Karbala with their families. There are many pediatric diseases associated with travel or mass gathering, the risks that children face while travelling they are likely similar to their parents face. Remember that young children have short attention spans and get illness very quickly (8). Globally, mass gathering that does consist of a large people number may affect the health security (1). The most commonly reported health problems among child's travelers are; diarrheal illness, dermatological problems, respiratory disorders and food poisoning (8, 9, 10). During the Arba'een of Imam Hussein there is no formal statistics or report about the common illness among children's pilgrims in Karbala city, and little information about the health problems during this mass gathering. This study was focusing on the common diseases among children's pilgrims attending to Holy Karbala at Arba'een of Imam Hussian.

As vital member of the healthcare provider, nurses have a concern about the competent and safe environment of patient care (11). Also, we need to explore methods to decrease the stress of diagnosis and treatment and develop the standard of care presented by the multi-disciplinary team (12).



**Pilgrims**  
**walking to the holy Karbala, for the Arba'een ritual**  
**Methods:**

**Design:** Quantitative cross-sectional study, conducted at three pediatric clinics, from the period of 12<sup>th</sup> to 20<sup>th</sup> of Safar 1440 (22<sup>th</sup>-30<sup>th</sup> October 2018).

**Setting:** The administrative permissions were obtained from pediatric clinics. Data was collected from 3 pediatric clinics located near to the Imam Hussein shrine and his brother Abaas shrine in the Holy Karbala city.

**Sample:** A non-probability (convenience) sample consists of 350 children, ages 1-12 years, came with their families to Holy Karbala city to participate in the Arba'een of Imam Hussein from Iraq and different countries. The researchers inform all parents and older children about the purpose of this study to ensure their agreement to be enrolled in this study. Also all participants assured the confidentiality of their information.

**Data Collection:** Data was collected from 3 pediatric clinics. Four pediatricians work in this clinic (two from Bahrain, one from Saudi Arabia and one doctor from Pakistan). The questionnaire format consist of two parts: the first part used to detect socio-demographic characteristics of children such as age, gender, and nationality. Part two was used to identify the common diseases and medical diagnosis. A direct interviewing was held by the investigator to obtain data from each children, their parents, and pediatrician doctors.

**Data analysis:** The data were analyzed by using the program of an IBM Statistical Package of Social Sciences (SPSS) Version 24 in order to analyze and assess the results of the study. Both descriptive statistical analysis procedures (frequency, percentage), were used to pattern of disease among children's pilgrims during Arba'een of Imam Hussein, and inferential statistical analysis was used to examine the association between disease with their socio-demographic characteristics.

**Results:**

**Table (1):** Distribution of diseases among children pilgrims according to their gender (n=350):

Gender		Patterns of diseases							
		Influenza (Flu)	Gastro-enteritis	Asthma	Tonsillitis	Sore Throat	Diabetes Mellitus	General Pain	Total
Male	F	100	41	6	13	14	2	12	188
	%	28.6	11.7	1.7	3.7	4	0.6	3.4	53.7
Female	F	90	29	3	13	11	1	15	162
	%	25.7	8.3	0.9	3.7	3.1	0.3	4.3	46.3
Total	F	190	70	9	26	25	3	27	350
	%	54.3	20	2.6	7.4	7.1	0.9	7.7	100

This table shows that majority (53.7%) of sample were males. Influenza (flu), and gastroenteritis are the most common diseases between males and females children that are represent 54.3%, and 20% respectively.

**Table (2):** Distribution of diseases among children pilgrims according to child's age (n=350):

Age		Patterns of diseases							
		Influenza (Flu)	Gastro-enteritis	Asthma	Tonsillitis	Sore Throat	Diabetes Mellitus	General Pain	Total
Infant	F	29	6	0	4	2	0	1	42
	%	8.3	1.7	0	1.1	0.6	0	0.3	12
Toddler	F	37	11	1	9	4	0	0	62
	%	10.6	3.1	0.3	2.6	1.1	0	0	17.7
Preschool	F	32	9	1	3	3	1	3	52
	%	9.1	2.6	0.3	0.9	0.9	0.3	0.9	14.9
School	F	65	25	2	6	14	1	9	122
	%	18.6	7.1	0.6	1.7	4	0.3	2.6	34.8
Adolescent	F	27	19	5	4	2	1	14	72
	%	7.7	5.4	1.4	1.1	0.6	0.3	4	20.6
Total	F	190	70	9	26	25	3	27	350
	%	54.3	20	2.6	7.4	7.1	0.9	7.7	100

This table reveals that majority (34.8) of sample was school age. Influenza (flu) (18.6%) followed by Gastroenteritis (7.1%) is the most common diseases between school age children.

**Table (3):** Distribution of diseases between children pilgrims according to their countries (n=350):

Country		Patterns of diseases							
		Influenza (Flu)	Gastro-enteritis	Asthma	Tonsillitis	Sore Throat	Diabetes Mellitus	General Pain	Total
Iraq	F	142	55	8	24	21	2	18	270
	%	40.6	15.7	2.3	6.9	6	0.6	5.1	77.1
Iran	F	43	12	1	1	4	1	8	70
	%	12.2	3.4	0.3	0.3	1.1	0.3	2.3	19.9
Bahrain	F	1	3	0	1	0	0	0	5
	%	0.3	0.9	0	0.3	0	0	0	1.4
Saudi Arabia	F	2	0	0	0	0	0	1	3
	%	0.6	0	0	0	0	0	0.3	0.9
Pakistan	F	1	0	0	0	0	0	0	1
	%	0.3	0	0	0	0	0	0	0.3
Lebanon	F	1	0	0	0	0	0	0	1
	%	0.3	0	0	0	0	0	0	0.3
Total	F	190	70	9	26	25	3	27	350
	%	54.3	20	2.6	7.4	7.1	0.9	7.7	100

This table reveals that majority (77.1%) of children's pilgrims was from Iraq follow by Iran (19.9%). Influenza (flu) followed by Gastroenteritis are the most common diseases between children's from different countries, it is represent about 54.3%, and 20% respectively.

**Table (4):** Distribution of diseases between children's pilgrims (n=350):

Diseases	All children's pilgrims		International children's pilgrims	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
Influenza (flu)	190	54.3	48	60.0
Gastroenteritis	70	20.0	15	18.8
Asthma	9	2.6	1	1.2
Tonsillitis	26	7.4	2	2.5
Sore throat	25	7.1	4	5.0
Diabetes Mellitus	3	.9	1	1.2
General pain	27	7.7	9	11.2
Total	350	100.0	80	100.0

This table reveals that influenza (flu) represent about 54.3%, followed by gastroenteritis 20% are the most common diseases between children's from different countries. Among international children's pilgrims about 60.0%, and 18.8% are have influenza (flu), and gastroenteritis respectively.

**Table (5):** Relationship between disease and socio-demographic characteristics of children's pilgrims:

		Country	Gender	Age group	Pattern of disease
Country	Pearson Correlation	1	.036	.052	-.018-
	Sig. (2-tailed)		.506	.327	.732
	N	350	350	350	350

<b>Gender</b>	Pearson Correlation	.036	1	.006	.024
	Sig. (2-tailed)	.506		.905	.650
	N	350	350	350	350
<b>Age group</b>	Pearson Correlation	.052	.006	1	.194**
	Sig. (2-tailed)	.327	.905		.000
	N	350	350	350	350
<b>Pattern of disease</b>	Pearson Correlation	-.018-	.024	.194**	1
	Sig. (2-tailed)	.732	.650	.000	
	N	350	350	350	350

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

This table shows a significant relationship between pattern of disease and children's age group at the 0.000 level.

#### **Discussion:**

The present study describes the diseases patterns among children's pilgrims attending to Holy Karbala city during the Arba'een of Imam Hussein. During this big mass gathering, child becomes at increased risk for a variety of diseases related to their behaviors, their health conditions, and to the environment (13, 6).

The results of the present study contrast with the findings of the study done by Arezou et al., (2018) concluded that during any mass gatherings rituals in Iraq, health is a serious problem due to over-crowding and the extensive heat. Infectious diseases, particularly acute respiratory tract infections, are the main problem among pilgrims and it is recorded as the most commonly cause of clinics admissions. The large mass gathering during pilgrimage, mainly in the months of Moharram and Safar, prepares major situations (8).

Acute respiratory tract infections, gastroenteritis, and different injuries occur worldwide. Throughout the Arba'een of Imam Hussein mass gathering and are not restricted to any age, gender, or nationality. Our study results show that are more than one half of children attending to Holy Karbala during Arba'een of Imam Hussein having acute respiratory tract infections followed by gastroenteritis. These results contrast with the result of the study that done by Memish et al., (2010) reported that upper respiratory tract infections is the major health problem among hajj pilgrims (14). Bakhsh et al., (2015) concluded that according to the patterns of diseases, it is recorded that 17.6%, 15.7%, and 13.2% of the pilgrims during hajj were complaining from respiratory disease, skin diseases, and gastrointestinal tract (GIT) diseases respectively (10).

Furthermore, the present study explores a significant relationship between disease and children age group. Respiratory tract diseases continue a main cause of illnesses in children particularly in children < five years old. The range of respiratory disease is extensive and contains illnesses of upper and/or lower respiratory tract, including transmitted and non-transmitted types. The differences in pattern of respiratory disease may be affected by several homes, climatic and/or environmental change in several region of the world, the world health organization (WHO) has been recognized acute respiratory infections as the primary cause of mortality among children < 5 years old (15, 16).

#### **Conclusion and recommendations:**

Upper respiratory tract infections are the most common health issues among children pilgrims attending to Holy Kerbala in Arba'een of Imam Hussian. According to the present study findings, the researchers recommended suggestions to decrease common diseases among children pilgrims during Al-Arba'een. In addition to that health instruction programs should be planned to all those who attending to participate in this mass gathering ritual to expand their awareness about preventive measures against upper respiratory tract infections, gastroenteritis, injuries and exacerbations of chronic illnesses.

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**Conflict of Interest:** The researchers affirm that they not have conflict of interest.

**Ethical Considerations:**

Ethical approval was achieved from pediatric clinics, as well as informed consent was obtained from all participants (families and their children) to signify their voluntary participations in this study.

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