

Spatial Variation of Suicide Cases in Babylon Governorate for the Period From (2004 - until mid-June 2022)

By

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Abstract

Suicide in its comprehensive sense means that the intentional act that ends with the killing of the person himself, and it is one of the new phenomena in Iraqi society because of the customs and traditions that prevent these acts and that this phenomenon has a great impact in the hearts of people, as it began to grow in all governorates of Iraq and in the governorate of Babylon in particular, as the number of suicide cases in the governorate after 2004 and until June 2022 was recorded (200) cases, in order to reduce this phenomenon, concerted efforts must be made to provide meaningful job opportunities for the population in the governorate, especially for young people, and to develop the necessary plans to prevent the abuse of drugs, painkillers and alcohol.

Keywords: Suicide, Extortion, Addiction, Psychological Variables, Despair, Poverty, Drugs.

Introduction:

Suicide has become a widespread behavioral phenomenon that covers the entire world, as a result of the frustrations faced by individuals and their inability to pursue the characteristics of this era, whether direct or indirect, and this makes them feel depressed and hopeless and pushes them to think about suicide, it is one of the important and sensitive topics that often attracts the attention of scholars, but we find that the study of the problem of suicide in Iraq is very few, hence the study that attempts to delve into this serious social problem that has begun to increase in the governorates of Iraq, including the province of Babylon.

Research problem:

The research problem is abstracted in the following set of questions:

- 1- Is there a temporal and spatial discrepancy in the phenomenon of suicide in the province of Babylon?
- 2- Is the phenomenon of suicide limited to a specific age group?
- 3- What are the main reasons that led people to commit suicide?

Research Hypothesis:

There is a spatial and temporal variation in the volume of suicide cases in the province of Babylon, and it is gradually increasing day after day, it is not limited to a specific age group in which this problem appeared, many psychological, economic, social and cultural variables play a role in increasing this phenomenon.

Research Aim:

The research aims to clarify the concept of suicide and its motives, to search for the reasons for the growth of the phenomenon of suicide, spatially and temporally, and to put some proposals to reduce this phenomenon and thus reduce it to the extent possible.

Research Methodology:

The research relied on the descriptive approach to show the spatial and temporal distribution of suicide cases and the analytical approach to data analysis to achieve the research objectives and reach the results.

Research limits:

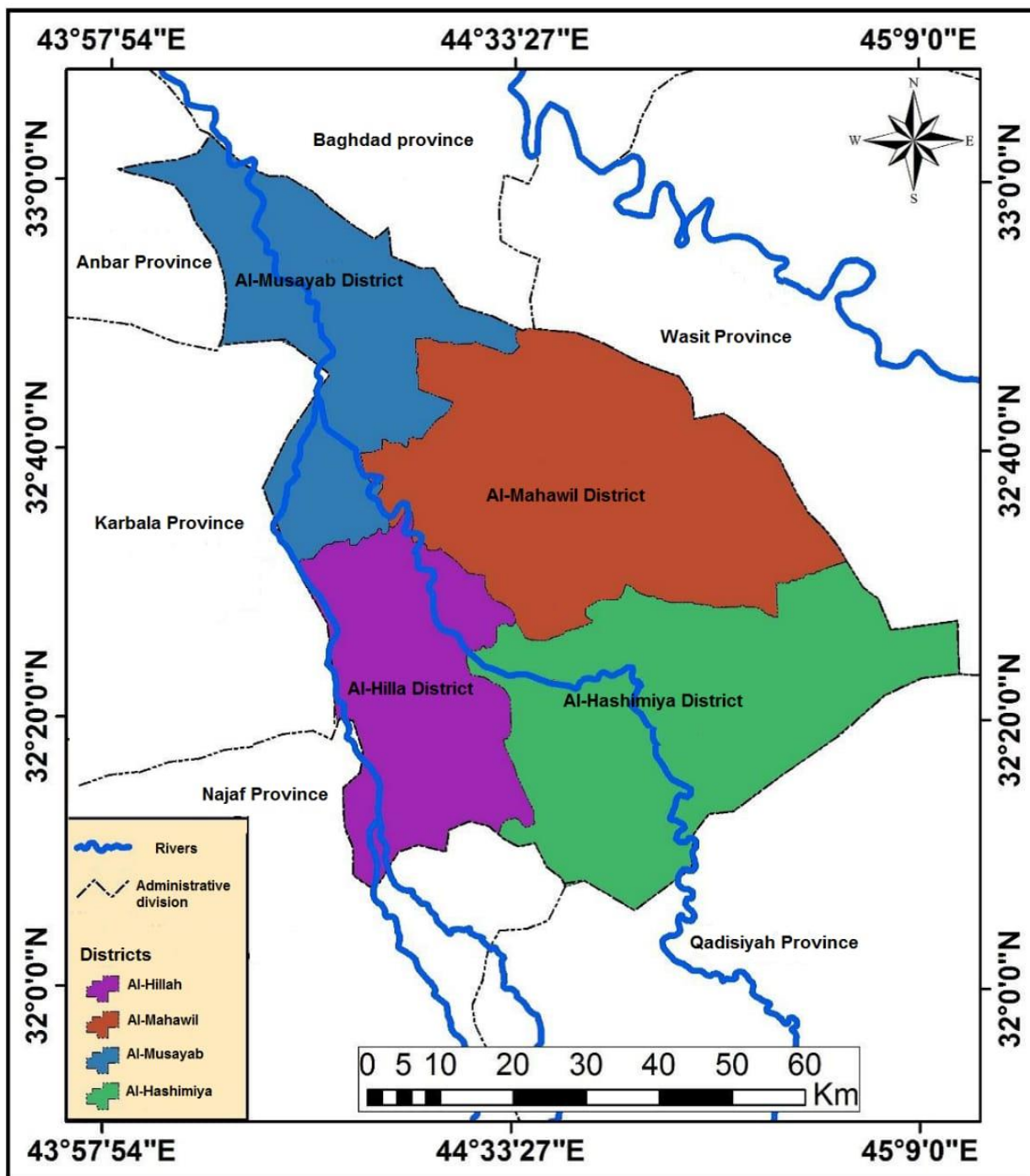
The limits of the research are represented in the province of Babylon in the central part of Iraq in the middle of the sedimentary plain as shown by Map (1) and between two latitudes (7 32 - 8 33) north, and longitudes (42 43 - 50 45) east, it is one of the provinces of the Middle Euphrates, bordered to the north by the Governorate of Baghdad, to the east, Wasit Governorate, to the south are the Governorates of Qadisiyah and Najaf, to the west are the Governorates of Anbar and Karbala, with a total area of (5,119) km², as for the time limits of the study, it was based on the available data from (2004 until mid-June 2022).

First: Suicide Concept:

It hurts when we hear that someone put an end to his life by committing suicide, as this behavior may be the result of a quick decision taken by the person, or he may take it as a result of losing consciousness due to the use of drugs or intoxicants, or sometimes he takes it for flimsy reasons that do not rise to killing oneself¹, all suicides, regardless of their motives, indicate the weakness of the perpetrators, since the reasons that may motivate them are worldly causes that can find many solutions, according to Freud, the author of psychoanalytic theory, suicide is an individual's motives that are hostile and directed towards the individual's self².

As for the social explanation of suicide, which is deduced from the social theory of (Dor Kayem), which attributes suicide to the individual's feeling that he is being rejected by society, which leads him to commit suicide³, suicide is defined as all cases of death committed by a person, whether directly or indirectly, and it is also defined as a deliberate act by a person to end his life, and it is also defined as a voluntary death that the individual submits to him to get rid of his problems that he cannot bear⁴.

Map (1) Location of Babylon Governorate



Source: Republic of Iraq, Ministry of Water Resources ,General Directorate of Survey, Department of Map Production ,Administrative Map of Babil Governorate,Size:500,000,Year:2021.

Hence, based on the previous concepts of suicide, we can say that suicide is the intentional killing of oneself by choosing an appropriate means chosen by the suicide person.

Second: Methods and Means of Suicide:

The method of suicide varies according to different methods based on the severity of its use and the effectiveness of its result, some use quick suicide methods such as: (burning with fire, throwing oneself from high buildings, using firearms, using more than one method at the same time, drowning suicide, taking poisons with a quick effect, suicide by hanging with

ropes and wires), others use slow means to commit suicide, such as: (cutting a number of arteries and veins and bleeding events, taking slow-acting toxic substances).

The choice of suicide method is left to the suicide person, although the common method in most cases is (hanging with ropes or wire and using firearms), regardless of the foregoing, the person who commits suicide often prepares the means that he deems appropriate and effective in bringing about death, but certainly there are determinants for choosing the method, such as the specific time of suicide, as the suicide person must choose an appropriate time that enables him to commit suicide without the intervention of others in that process, i.e. ensuring that he will not be saved, and also the ease of obtaining the means of suicide, as well as psychological determinants such as the psychological readiness of the individual and his health condition before committing suicide.

Third: Suicide factors and motives:

There are many factors and motives for suicide that overlap with each other, including social, economic and psychological, and it is not possible to separate them and determine the main reason that was adopted as a motive for suicide, but we can separate them for the purpose of clarification and the specific reference, which is as follows:

Psychological:

The state of frustration that a person suffers from, as well as anxiety and fear of the future and the inability to meet the requirements of life in all its forms puts that person under psychological pressure and depression, which leads him to think about suicide and get rid of psychological pressures.

Economic:

The number of suicides increases in severe economic crises, and researchers confirm that suicide rates rise during periods of depression, unemployment and growing poverty, which can contribute to the dismantling of the family structure by the occurrence of family disputes between members of the same family and the weak relationship between parents and children as a result of the inability of fathers to meet the physical and psychological needs.

Social:

Social motives play an important role in the phenomenon of suicide, as family disintegration, the increase in divorce cases, the failure to continue studying or to establish true and honest emotional relationships, as well as the delay in the age of marriage among young people, all of these things would lead to suicide.

Cultural:

What is shown on satellite channels of series, movies, programs and what is written on social networking sites with the absence of guidance, direction, awareness and education has a great impact on people's behavior and influence on their minds, which leads to a growing case of suicide among them.

Electronic Extortion:

It is a process of threatening and intimidating the victim by publishing pictures or film materials or leaking confidential information belonging to the victim, in exchange for payment of money or the exploitation of the victim to carry out illegal acts for the benefit of the extortionists, such as disclosing confidential information about the employer or other illegal acts, and usually phishing Victims through various social media, which are factors and motives that may lead to the victim's suicide.

Psychological and mental illnesses:

There are many psychological and neurological diseases, such as depression, schizophrenia, and other diseases that make the patient feel bored and depressed, and all these feelings provoke the desire to leave life and commit suicide attempts.

Drug addiction:

the growing phenomenon of drug addiction among some people and the body's dependence on pills and drugs, and then suffering and pain when the effect of these narcotic substances withdraws, which leads to the emergence of psychological effects that may lead to behavioral disturbance for these individuals and their feet to commit suicide.

Fourth: Population and its administrative distribution in Babylon Governorate:

The population of Babylon Governorate is about (2174788) people, and their distribution varies among the administrative units in the governorate, the population of Al-Hilla district reached (885980) people, at a rate of (41%) of the total population ⁵, Al-Hashemiah District came in second place with a number of (462,184) people, at a rate of (23%), while Al-Mahaweel district came in third place, with a population of (372922) people, at a rate of (17%), while Al-Musayyib district recorded a population of about (257156) people, at a rate of (12%) of the total population in Babylon Province, the relative distribution reveals that there is a clear concentration of the population in the district of Al-Hilla, specifically in the center of the district, at a rate of (28.1%), this is because it is the center of the governorate, as well as the economic, administrative and educational center of the governorate, and most of the health, recreational and other services are available.

Table (1) The numerical and relative distribution of the population by administrative units in Babylon Governorate for the year (2020)

S.	Administrative units	Population (people)	(%) Percentage	Area (km ²)	Density (people /km ²)
1	Al-Hilla District Center	612976	28	259	2367
2	Al-Kifl District	153829	7	473	325
3	Abi-Garaq District	119175	5	190	627
	Total district	885980	41	922	961
1	Musayyib District Center	60382	2	11	5489
2	Sadat Al-Hindea District	127508	5	264	483
3	Jurf Al-Sakhar District	51789	2	345	150
4	Alexandria District	17477	8	378	46
	Total District	257156	17	998	258
1	Hashemite District Center	39,253	1	8	4907
2	Al-Qasim district	174736	8	312	560
3	Al-Medhatiya District	149036	6	568	262
4	Al-Shomali District	95,689	4	551	174
5	Al-Talieaa District	42723	1	313	136
	Total District	462184	23	1752	264
1	Al Mahaweel District	128,234	5	292	439
2	Al-Mashrwoa District	139,673	6	647	216
3	Al-Imam District	40459	1	225	180
4	Al-Nil District	64556	2	470	137
	Total District	372922	19	1635	228
	Total County	2174788	100	5307	410

Source: Republic of Iraq, Ministry of Planning, Central Statistical Organization, Babylon Governorate Statistics Directorate, Population Estimates (2020) unpublished data.

Fifth: Spatial Distribution of Suicide by Administrative Units in Babylon Governorate:

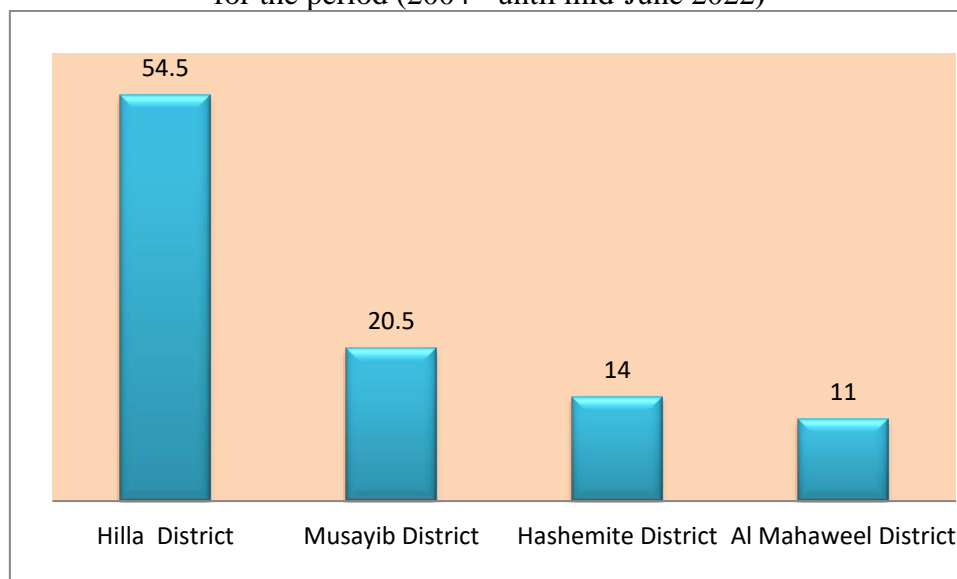
It is very important to follow the movement of suicides in the population to determine its size, calculate its annual rates, and find out whether it occurs at rates that indicate the unusual loss of human resources, so it can be considered a demographic problem, the study of recorded suicides at the level of administrative units is of great importance as it is an important input to show the variance among them and to know the distribution of recorded suicides requires the collection of data recorded annually in order to reach the nature of the time trend of suicides ⁶, to find out whether this indicates a case of a rise in its rate or a decrease in its rate. From Table (2) and Figure (1), it became clear that the total number of suicides recorded in the whole of Babylon Governorate (200) cases, most of them were recorded in Al-Al-Hilla district, with a rate of (109) cases, and a rate of (54.5%), this rise in suicide cases in Al-Hilla district may be due to the large population size that characterizes the district compared to other administrative units, followed by Al-Musayyib district with (41) cases and at a rate of (20.5%), then Al-Hashemiah district with (28) cases and a rate of (14%), while Al-Mahaweel district recorded the lowest suicide cases in the governorate with (22) cases and a rate of (11%).

Table (2) Distribution of recorded suicide cases for administrative units in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	Al-Hilla District	Musayib District	Hashemite District	Al Mahaweel District	Total
2004	1	1	0	0	2
2005	2	0	0	0	2
2006	0	0	0	0	0
2007	1	0	0	0	1
2008	2	0	0	1	3
2009	2	1	1	0	4
2010	3	1	1	1	6
2011	4	4	0	1	9
2012	8	5	1	2	16
2013	3	1	2	1	7
2014	0	1	0	0	1
2015	5	3	2	0	10
2016	2	0	1	3	6
2017	8	5	4	2	19
2018	8	4	1	0	13
2019	13	2	6	4	25
2020	16	5	2	2	25
2021	16	3	4	3	26
2022	15th	5	3	2	25
Total	109	41	28	22	200
Percentage	54.5%	20.5%	14%	11%	100%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (1) Percentage of suicides registered for administrative units in Babylon Governorate for the period (2004 - until mid-June 2022)



Source: Based on the data in Table (2).

Environmental Distribution of Suicide Cases:

The follow-up of the distribution of suicides in the environment helps to know the pattern of the distribution of suicides and its relationship to the environmental reality of the population and its reflection on the social and life reality of them, that is, between rural and urban, the changes in their environmental distribution reflect the social, cultural and development trends in each of the two societies, and the impact of this on the variation in the volume of suicides in each of them⁷.

It is clear from the analysis of Table (3) and Figure (2) that the total number of suicides in the urban areas of Babylon Governorate has reached six times that of the rural areas, as their number reached (171) cases, at a rate of (85.5%), while suicide cases in rural areas amounted to about (29) cases, or (14.5%), which is a very high percentage, this may be due to the population increase witnessed by the urban centers in the governorate due to migration from other governorates, as a result of the security situation and as a result of migration from the governorate's countryside due to the lack of job opportunities.

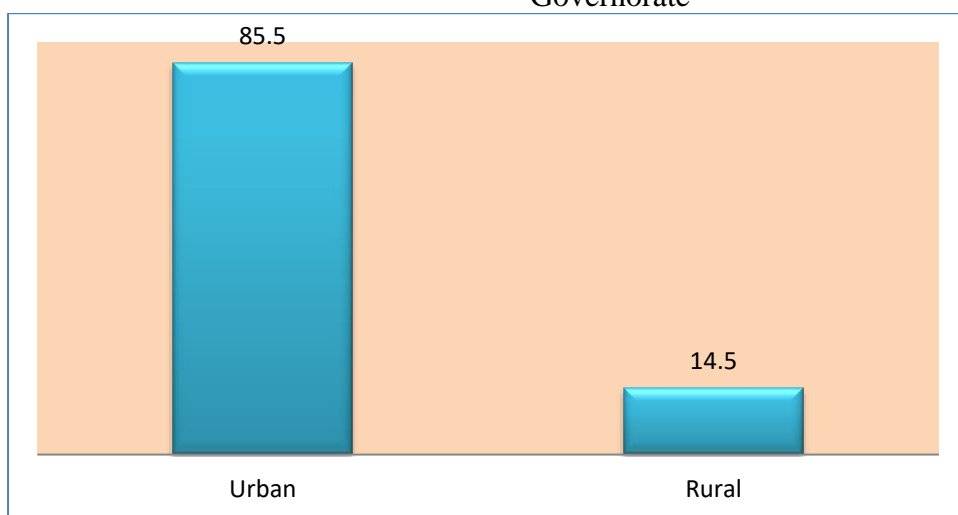
Table (3) The environmental distribution of suicide cases recorded in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	The number of suicides	Living	
		Urban	Rural
2004	2	2	0
2005	2	2	0
2006	0	0	0
2007	1	1	0
2008	3	2	1
2009	4	3	1
2010	6	5	1
2011	9	7	2
2012	16	13	3
2013	7	6	1

2014	1	1	0
2015	10	9	1
2016	6	6	0
2017	19	17	2
2018	13	12	1
2019	25	21	4
2020	25	20	5
2021	26	21	5
2022	25	23	2
Total	200	171	29
Percentage	100%	85.5%	14.5%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (2) Percentage of the environmental distribution of suicide cases recorded in Babylon Governorate



Source: Based on the data in Table (3).

Qualitative distribution of suicides:

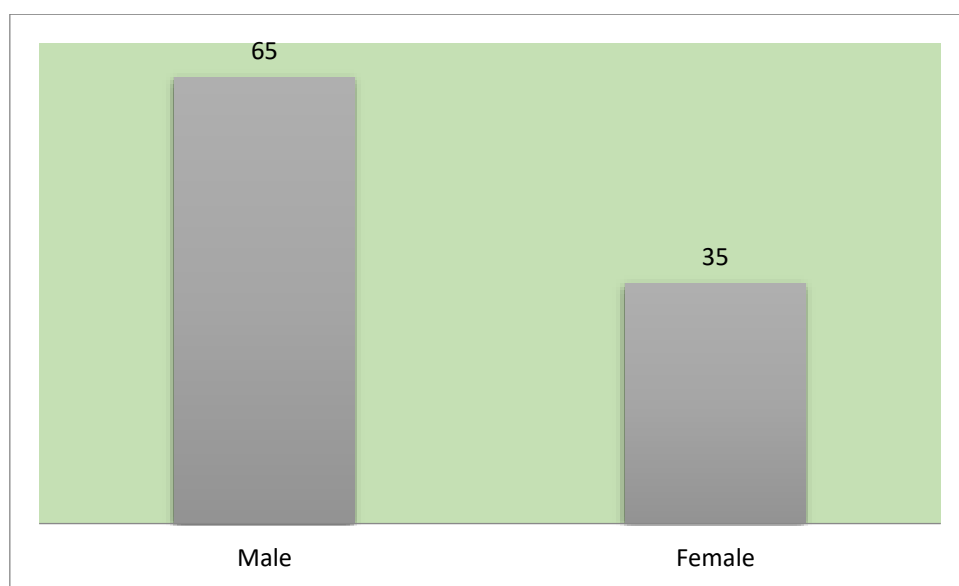
Studies confirm that males are more motivated in successful suicide attempts than females, this is because males are afraid of social undesirability, and they are also afraid to appear weak as suicidal, for these reasons, when they commit suicide attempts, they are often successful, and they often use firearms and hanging in their suicide attempts, while for the females, they often take drugs or cut the blood vessels with their hands more in their suicide attempts⁸, through the data of Table (4) and Figure (3), it is clear that suicide cases among males have reached nearly double the number of suicides among females, reaching (130) cases at a rate of (65%), while suicide cases among females amounted to (70) cases, it accounts for 35% of the total suicide cases in the governorate.

Table (4) The qualitative distribution of suicide cases registered in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	Number of suicides	Gender	
		Male	Female
2004	2	2	0
2005	2	2	0
2006	0	0	0
2007	1	1	0
2008	3	2	1
2009	4	3	1
2010	6	5	1
2011	9	6	3
2012	16	11	5
2013	7	5	2
2014	1	0	1
2015	10	6	4
2016	6	3	3
2017	19	12	7
2018	13	7	6
2019	25	18	7
2020	25	13	12
2021	26	22	4
2022	25	12	13
Total	200	130	70
Percentage	100%	65%	35%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (3) Percentage of the qualitative distribution of suicide cases recorded in Babylon Governorate.



Source: Based on the data in Table (4).

Distribution by age structure:

Suicide cases vary according to the age structure from one country to another. When the percentage is high for the elderly group in a country, we find that the category of young people and in the adolescence stage is more high in another country, and this can be linked to the events experienced by the teenager, starting from simple events to more dangerous ones, it is mostly related to the system of relations existing between the teenager and his family on the one hand, and his relations with others on the other hand⁹.

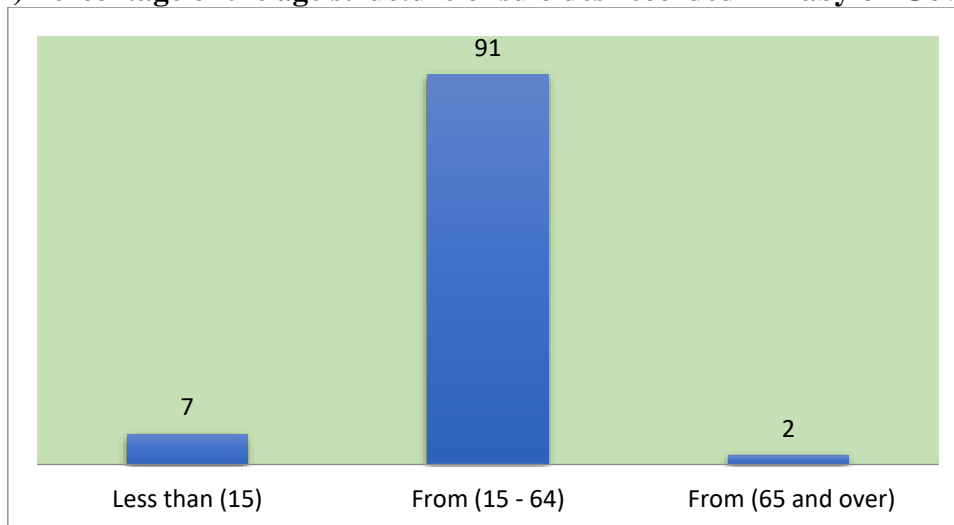
In the study area, and through the data of Table (5) and Figure (4), it is clear that the age group that is confined between (15-65) constitutes the largest percentage of suicide cases, estimated at (182) suicide cases, at a rate of (91%) of the total suicide cases, as for the age group less than (15), it amounted to about (14) cases of suicide, at a rate of (7%), while the elderly group for more than (65) recorded about (4) cases, at a rate of (2%) of the total suicide cases in the governorate.

Table (5) Distribution according to the age structure of recorded suicides in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	Number of suicides	Age group		
		less than (15)	From (15 - 64)	from (65 and over)
2004	2	0	2	0
2005	2	0	2	0
2006	0	0	0	0
2007	1	0	1	0
2008	3	0	2	1
2009	4	1	3	0
2010	6	2	3	1
2011	9	0	9	0
2012	16	2	13	1
2013	7	1	5	0
2014	1	0	1	0
2015	10	3	7	0
2016	6	0	6	0
2017	19	1	18	0
2018	13	1	12	0
2019	25	2	23	1
2020	25	1	24	0
2021	26	0	26	0
2022	25	0	25	0
Total	200	14	182	4
Percentage	100%	7%	91%	2%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (4) Percentage of the age structure of suicides recorded in Babylon Governorate



Source: Based on the data in Table (5)

Distribution by job or work (profession):

The geographical distribution of suicide cases varies according to job or work from one place to another in the study area, this can be seen in Table (6) and Figure (5), as the suicides of the earner category, which is the first category among the suicides, amounted to about (68) cases, at a rate of (38%) of the total suicide cases in the governorate, followed by the category of housewives (50) cases, at a rate of (25%) and then the student category with (39) cases and a percentage of (19.5), as for the category (students, military, employee, retired, daily wage, farmer, media person), the percentages reached about (8%, 4%, 4%, 2.5%, 1.5%, 1%, 0.5%), respectively.

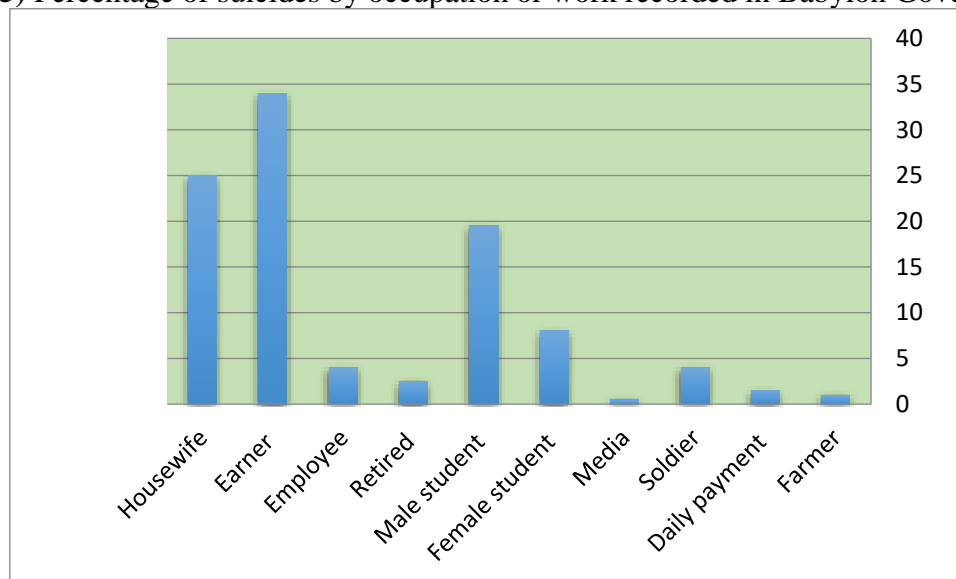
Table (6) Distribution by occupation or work of suicide cases recorded in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	Number of suicides	Job or work (profession)									
		Housewife	Earner	Employee	Retired	Male student	Female student	Media	Soldier	Daily wage	Farmer
2004	2	0	2	0	0	0	0	0	0	0	0
2005	2	0	1	0	0	1	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0
2007	1	0	0	0	0	1	0	0	0	0	0
2008	3	1	2	0	0	0	0	0	0	0	0
2009	4	0	2	0	0	1	1	0	0	0	0
2010	6	1	3	0	0	1	0	0	0	1	0
2011	9	2	4	0	0	1	1	0	0	0	1
2012	16	4	4	1	1	3	1	0	1	1	0
2013	7	2	3	0	0	1	0	0	1	0	0
2014	1	0	1	0	0	0	0	0	0	0	0
2015	10	3	1	1	0	5	0	0	0	0	0
2016	6	2	1	0	0	2	0	0	1	0	0
2017	19	6	8	1	0	2	1	0	1	0	0
2018	13	6	4	0	1	1	0	0	0	0	1
2019	25	5	5	2	1	8	2	1	1	0	0

2020	25	9	8	1	1	2	2	0	2	0	0
2021	26	4	11	0	1	7	1	0	1	1	0
2022	25	5	8	2	0	3	7	0	0	0	0
Total	200	50	68	8	5	39	16	1	8	3	2
Percentage	100%	25%	34%	4%	2.5%	19.5%	8%	0.5%	4%	1.5%	1%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (5) Percentage of suicides by occupation or work recorded in Babylon Governorate



Source: Based on the data in Table (6)

Distribution according to social status:

Suicide cases vary in Babylon Governorate, according to the social situation, it is noted from Table (7) and Figure (6) that suicide cases were recorded about (77) cases, and at a rate of (38.5%) for singles, on the other hand, the number of married persons who committed suicide was about (52), at a rate of (26%), while the number of early suicides was (39) cases, at a rate of (19.5%), as for the number of married women who committed suicide, about (32) cases, at a rate of (16%).

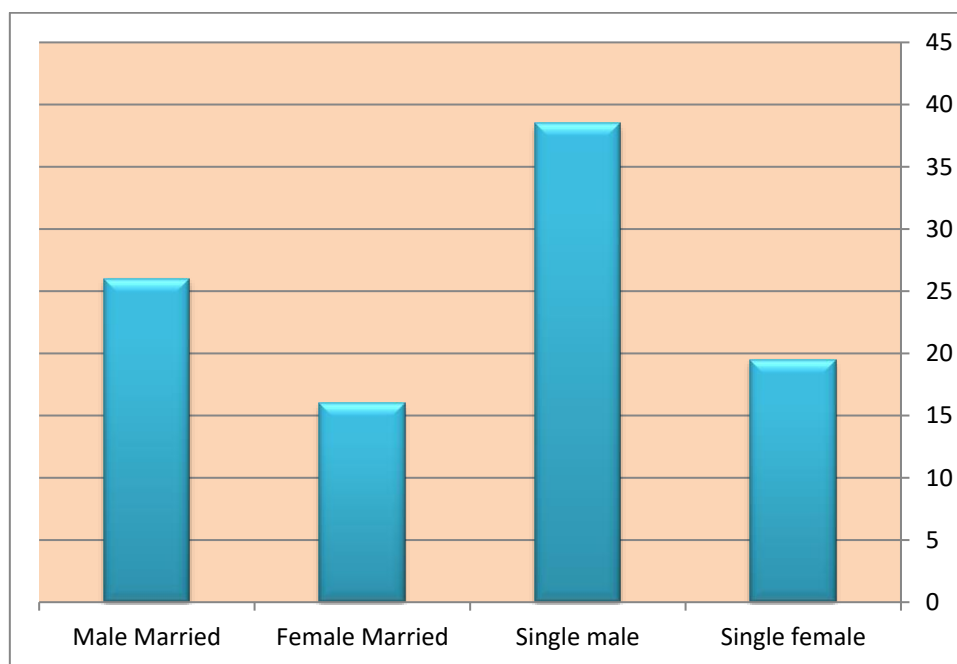
Table (7) Distribution by marital status of suicides registered in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	Number of suicides	Marital status			
		Male Married	Female Married	Single male	Single female
2004	2	1	0	1	0
2005	2	0	0	2	0
2006	0	0	0	0	0
2007	1	1	0	0	0
2008	3	1	0	1	1
2009	4	1	1	2	0
2010	6	2	1	3	0
2011	9	3	2	3	1
2012	16	6	2	5	3
2013	7	2	0	3	2

2014	1	0	0	0	1
2015	10	2	0	4	4
2016	6	2	1	1	2
2017	19	6	3	6	4
2018	13	1	3	6	3
2019	25	6	4	12	3
2020	25	3	7	10	5
2021	26	10	3	11	2
2022	25	5	5	7	8
Total	200	52	32	77	39
Percentage	100%	26%	16%	38.5%	19.5%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (6) Percentage of suicides by registered marital status in Babylon Governorate



Source: Based on the data in Table (6)

Distribution according to the means used:

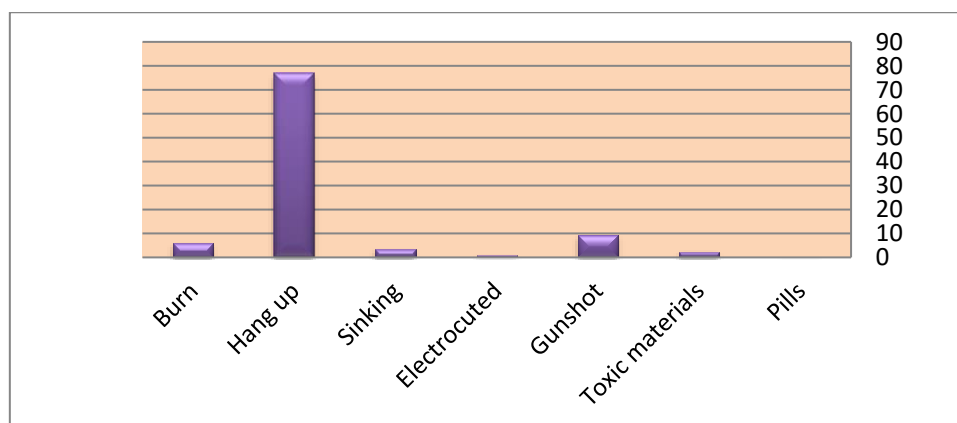
Despite the multiplicity of methods used in suicide that were mentioned previously, the hanging method recorded the highest methods used in suicide, through the data of Table (8) and Figure (7), it is clear that (154) cases used this method at a rate of (77%) out of (200) condition, followed by the method of shooting, which numbered (19) and accounted for (9.5%) of the total suicide cases in the governorate, as for the burning method, the number of cases was (12) cases, at a rate of (6%), as for the other methods (drowning, toxic substances, electrocution, pills) they reached (7, 5, 2, 1) cases, respectively.

Table (8) Distribution by means of suicide cases recorded in Babylon Governorate for the period (2004 - until mid-June 2022)

Years	Number of suicides	Means of suicide used						
		Burn	Hang up	Sinking	Electrocuted	Gunshot	Toxic materials	Pills
2004	2	0	2	0	0	0	0	0
2005	2	0	2	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	1	0	1	0	0	0	0	0
2008	3	1	2	0	0	0	0	0
2009	4	0	3	0	1	0	0	0
2010	6	0	4	0	0	1	1	0
2011	9	2	6	1	0	0	0	0
2012	16	1	14	0	0	1	0	0
2013	7	0	6	1	0	0	0	0
2014	1	0	1	0	0	0	0	0
2015	10	0	10	0	0	0	0	0
2016	6	0	6	0	0	0	0	0
2017	19	2	12	0	0	5	0	0
2018	13	0	10	1	0	2	0	0
2019	25	1	17	4	0	1	2	0
2020	25	3	17	0	1	2	1	1
2021	26	1	21	0	0	4	0	0
2022	25	1	20	0	0	3	1	0
Total	200	12	154	7	2	19	5	1
Percentage	100%	6%	77%	3.50%	1%	9.50%	2.50%	0.50%

Source: Ministry of Health, Babylon Health Directorate, Forensic Medicine Department, unpublished data, 2022.

Figure (7): Percentage of the means used for suicide cases recorded in Babylon Governorate



Source: Based on the data in Table (7).

Conclusions:

- 1- Al-Hilla district recorded the highest rates of suicides during the study period by (109) out of (200) and (54.5%), as a result of the high population size in the district compared to the rest of the districts.
- 2- The study showed that the total number of suicides in the urban areas of Babylon Governorate has reached six times that of the rural areas, with a number of (171) cases, and a rate of (85.5%).
- 3- The study showed that suicide cases among males have reached nearly double the number of suicides among females, reaching (130) cases, at a rate of (65%).
- 4- It turns out that the age group that is confined between (15-65) constitutes the largest percentage of suicide cases, estimated at (182) suicide cases, with a rate of (91%).
- 5- The study confirmed that the suicides of the earner category, which is the first category among suicide cases, is about (68) cases, at a rate of (38%).
- 6- The study showed that about (77) suicide cases were recorded, at a rate of (38.5%) for the single category.
- 7- The study showed that the method of hanging recorded the highest method used in suicide, reaching (154) cases, and at a rate of (77%).

Recommendations:

- 1- The necessity of working on psychological and civic awareness in school curricula and how to face pressures and problems that help suicide.
- 2- Active participation of the clergy, religious and educational institutions and others, and activating their role in educating young people on the inviolability of such acts.
- 3- Work to hold the various media outlets that promote this phenomenon accountable through their publication of suicide cases in order to obtain profitable views.
- 4- Providing opportunities for the unemployed and eliminating poverty and unemployment by providing material aid to the poor and needy, since most of the suicide cases in the governorate are from the category of earners.
- 5- Enact strict laws and regulations to limit access to firearms and deadly poisons.
- 6- Raising awareness of the dangers of drugs and painkillers and their impact on society, as they are one of the means that pave the way for suicide cases in the governorate.

Sources and Footnotes:

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 - ³ Abdul-Jalil Abdul-Wahhab Abdul-Razzaq, Spatial Analysis of Suicide Cases in Iraq - Al-Muthanna Governorate as a Model, Uruk Journal for Human Sciences, No. (3), Volume (12), 2019, p. 1891.
 - ⁴ Ibid., p. 1892.

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- ⁵ Republic of Iraq, Ministry of Planning, Central Statistical Organization, Babylon Governorate Statistics Directorate, Population Estimates (2020) unpublished data.
- ⁶ Maher Nasser Abdullah, Spatial Analysis of Suicide Cases in Najaf Governorate for the Period (2005-2015), Journal of Human Sciences, College of Education for Human Sciences, No. (2) Volume (33), 2016, p. 5.
- ⁷ Ibid., p. 8.
- ⁸ Tebah Fadhel Abbas, Ghazwan Yahya Yousef, the phenomenon of suicide and an epidemic affecting the Yazidi community, research published on the Internet (www.sotaliraq.com), 2012, p. 14.
- ⁹ Maher Nasser Abdullah, Spatial Analysis of Suicide Cases in Najaf Governorate for the Period (2005-2015), previous source, p. 16.