



Article

A Statistical Study of Stroke Patients

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Abstract: Stroke is a critical medical emergency characterized by a blockage of blood flow to the brain, which can result in irreversible damage and increased mortality risk. Despite widespread awareness of its symptoms—such as weakness in limbs, speech difficulties, severe headaches, and vision disturbances—there remains a knowledge gap regarding timely intervention and response strategies. This research aims to assess current understanding of stroke recognition and emergency response among the general public. Utilizing a mixed-methods approach, we surveyed and interviewed individuals to evaluate their knowledge and perceptions of stroke symptoms and urgency. Preliminary results indicate significant variability in awareness, highlighting a need for improved educational initiatives. The implications of this study underscore the importance of enhancing public knowledge to facilitate quicker emergency responses, ultimately reducing the incidence of long-term disabilities associated with stroke.

Keywords: Stroke, Medical emergency, Public awareness, Emergency response, Educational initiatives.

1. Introduction

Recently, a group of stroke experts have indicated a change. The term “stroke” is referred to as “brain attack” in order to spread awareness in Medical forums, and among ordinary people, believe that the brain is just as important as the heart. [1] Doctors today have become wiser and realize that a lot can be done for prevention Of strokes and their treatment, many people confuse a stroke with a seizure. [2] Although they are similar, a heart attack results in chest pain. While producing a stroke, stroke is caused by blood vessels. And they are associated with heart attacks with sudden pain in the chest and arm, in addition to feeling Nausea and dizziness, while strokes are accompanied by pain but symptoms are various, including sudden loss of movement and problems with speech and vision. And balance.

The stroke is considered so distinct that the Greeks invented it. The ancients used the term “apoplexy”, which is the old name for it in the language English (the recently used name is stroke). There is no doubt that the stroke is not a symptom, but is often the result of decades of wear and tear. Blockage of the vessels that supply the brain with blood. However, it is still a term. “Cerebrovascular accident” is commonly used to describe this condition. Risk rises as one gets older; It usually occurs in men. More than women, about 110,000 people suffer a stroke once. The first every year, which is two per thousand annual [3].

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Search problem

After not realizing the impact of negative habits on healthThe humanIn general. He said the efficiency of some institutions about hisInstructionsThe necessary instructions, to preventDiseases. The stroke is one of the oneDiseasesSerious and causing chronic and severe disabilities. So as reported inGlobal concentrated in second place as moreDiseasesIt is common in the occurrence of death globally. Based on the above, this disease must be identified , and detected how to reduce listing,QuestionsInspiration, including: What isAvailable on the rate of its consequences as possible. Search for some stroke ,and spreadCerebral? WhatلعالقهOf the strokeCerebral? When did the nervous system, and some other terms?[4]

2. Materials and Methods

The importance of research

This research is concerned with discussing all stroke, aspects accuratelyTo explain the importance, of such a quick start to treat this disease and how they cooperateAll health care providersTo, saveLife patients as muchPossibleTogether for some qualifying treatment.[5]

Search objectives

The discovery of roadsModern,In the use of drugs that relate fromInjuryCerebralFollowSystemsFood is one of the most, successful health,And more effective, on human health[6]

How the search works

We conducted the research by one-way analysis of variance (ST ANOVA). It is: a statistical method used to show the, difference between two or more means by analyzing the difference within and between groups. We used it in this research. It was obtained from a sample of 100 people, 50 of whom were male and 50 of whom were female, among patients attending the Medical City Teaching Hospital.

This data represents the incidence of stroke, as it consists of 60 affected people and 40 healthy people, and their weight data (thin - fit - fat - obese) and age is divided into categories (less than, 20-30, 20-50, 31-40, 51, 60, We will analyze the data (61 and more) and smoking (smoker and non-smoker), whether or not they were exposed to shock prior to the stroke, and their degree of agitation (fluctuating, calm) during crises. [7]

What is the stroke? And how you get.

Speaking stroke when blood supply, is interrupted into a brain or decreased; Which prevents brain tissue, from gettingElements Nutrientc medical condition, immediate treatment is adultImportance of. Can be treatedEnshrinedIt is less than, brain damage and complicationsOther. -Hidden stroke [8]

Types of stroke.

1. 1Ischemic, stroke
2. Hemorrhagic strok.
3. Hidden stroke

How to reduce your percentageInjuryOut

Adjust blood pressure hypertension. This is one of the most importantThingsWhichAs a stroke. If you are exposed as they do to reduce the riskFor previous brain, lostCount blood pressure reduction in the prevention NubiaTransboundary or later stroke. Healthy lifestyle changes are often usedDrugsFoi your systemFoodEat lower quantities of cholesterol and fat, especially saturated fat and unsaturated fats, from the accumulation of fat in two arts.ASet sailAbout,Use tobacco. Smoking is increasingInjuryThe stroke has a two-sinary and non-tidal who are

exposedSmokingMaintain healthy weight.Contribute toWeight gain in hazard factors
OtherStroke, such as high blood pressure [9]

How to diagnose.

1. Physical examination.
2. Screening of computer photography.

What areSymptomsAnd the resulting health problems

1. a problem in talking and understanding, what he saysOthers.
2. Problems in the eyeball in, one eye or both eyes.
3. headaches.
4. Difficulty walking.

Hypotheses,Use contrast analysis:[10]

1. independence
2. homogeneity of contrast
3. Natural distribution

Studies on stroke

1. Types of strokes: Many studies focus on different types of strokes, such.
2. Risk ,factors: Studies address risk factors associated with strokes, such as high blood pressure, diabetes, smoking, and a family history of heart disease.
3. Symptoms and diagnosis: Some research includes how to identify stroke symptoms and the best early diagnosis methods, including the use of imaging techniques such as CT or MRI.
4. Treatment and interventions: There are studies focusing, on different treatment options, including drug treatments such as anticoagulants and surgical procedures.
5. Post-stroke rehabilitation: Some studies examine, different methods of rehabilitation and ,improving the quality of life for stroke survivors.
6. New research: There is also new research, emerging in areas related to prevention, early detection, and new trends in the treatment of strokes . To find specific studies, you can use databases such as, PubMed or Google Scholar to search, for academic articles related to, stroke.

3. Results and Discussion

Including SPSS we will analyze the data
Statistically and Calati

Table 1. Analyze contrast for sex variable

Sex	Sum of squares	df	Mean Square	F	Sig
Groups Between	042	1	042	164	687
Within Groups					
Total	29.598	98	250		
	25.000	99			

The table is above the lack of significant differences and lack of disabled people

The groups where the value of Allah is equal to 687 (which is greater than the importance of 0.05 when Frequent degrees) 1 groups between) and) 98 groups in line) and

therefore do not exist Statistical, where we accept the zero defendant as "the differences between groups of groups" Thus, there is no impact of sex variable on the disease[11]

Table 2. Analysis of variance for the age variable

The Age	Sum of squares	df	Mean Square	F	Sig
Between Groups	121.660	1	21.600	18.158	000
Within Groups	116.900	98	1.193		
Total	138.560	99			

We notice from the table above that there are significant differences, that is, the are differences between the means of the groups The significance value was equal to" (0.000), which is less than the significance level of 0.05 at degrees of freedom. (1 groups Between) and (98 groups within) and therefore ,there is statistical significance, as We reject the null hypothesis that "there are no differences between the means of the groups." e accept the alternative hypothesis From this we infer that age has a significant impact on the incidence of stroke.[12]

Table 3. Repoet

Age stroke	Mean	N	Std
61	1.50	2	777
60-51	2.00	10	000
40-31	1.54	13	519
50-41	1.36	33	489
30-20	1.24	33	435
20	1.22	9	441
Total	1.40	100	492

We also notice that the highest rate is found in older ages, as it is more than what we find in older ages Small, we infer this from the arithmetic average table above[13]

Table 4. Analysis of variance for the weight variable

The weight	Sum of squares	df	Mean Square	F	Sig
Between Groups	4.167	1	4.167	4.597	035
Within Groups	88.833	98	906		
Total	93.000	99			

We notice from the table above that there are significant differences, that is, there are differences between the means of the groups, where The significance value was equal to "(0.35), which .is less than the significance level of 0.05 at degrees Freedom (1group btwen(and)98group within) and therefore there is statistical significance where we reject The null hypothesis is: "There are no differences between the means of the groups." We accept the alternative hypothesis We notice from the arithmetic averages table that the highest percentage is found for people with high weights (fat, obese)[14]

Table 5. Analysis of variance for the smoking variable

Smoking	Sum of squares	df	Mean Square	F	Sig
Between Groups	1.024	1	1.042	4.261	042
Within Groups					
Total	23.958	98	244		
	25.000	99			

We notice from the table above that there are significant differences, that is, there are no differences between... Averages of the groups where the significance value was equal to (042), which is less than the level of significance 0.05 at degrees of freedom (1 groups Betwen) and (98 groups within) and therefore there are Statistical significance, where we reject the null hypothesis that "there are no differences between the means of the groups." We say that smoking has a significant effect on stroke[15]

Table 6. Analysis of variance for the shock variable

Shock	squares Sum of	df	Mean Square	F	Sig
Between Groups	2.535	1	2.535	11.958	001
Within Groups					
Total	20.775	98	212		
	23.310	99			

We notice from above are that is, there are between the means of the groups The significance value was equal to (0.001), which is less than the significance level of 0.05 at degrees of freedom. (1 groups Betwen) and (98 groups within) and therefore there is statistical significance, as We reject the null hypothesis that "there are no differences between the means of the groups." We accept the alternative hypothesis. Which indicates that there is a significant impact of trauma on the incidence of this serious disease[16]

Table 7. Analysis of variance for the emotion variable

Emotion	Sum of squares	df	Mean Square	F	Sig
Between Groups	1.127	1	1.127	4.633	034
Within Groups					
Total	23.833	98	243		
	24.960	99			

We notice from the table above that there are significant differences, that is, there are differences between the means of the groups. The significance value was equal to (0.0034), which is less than the significance level of 0.05 at degrees of freedom (1 group between and 98 groups within) and therefore there is no statistical significance. Where we reject the null hypothesis that "there are no differences between the means of the groups," we accept the alternative hypothesis which indicates that there is an effect of the nervous condition on the incidence of stroke [17].

4. Conclusion

In conclusion, this study reveals significant insights into the incidence and risk factors associated with stroke, highlighting that while gender does not influence stroke occurrence, age emerges as a critical determinant, with higher rates observed in older populations. Additionally, weight status, particularly obesity, was identified as a substantial risk factor, alongside notable effects of smoking and trauma on stroke incidence. These findings underscore the need for targeted public health interventions focusing on weight management, smoking cessation, and awareness of stroke symptoms, particularly in aging populations. Further research is warranted to explore the underlying mechanisms linking these risk factors to stroke, as well as to assess the effectiveness of educational campaigns aimed at improving early recognition and response to stroke symptoms in diverse demographic groups.

Recommendations

Stroke prevention. There may not be a specific way to prevent stroke, but there are some factors that, in turn, it reduces the chances of a stroke, occurring as follows: Make sure to control your blood pressure level. Take care to regulate the heartbeat; It is included in the cases of atrial fibrillation. One of the ways to prevent stroke. Stay away from smoking; And alcoholism, where the risk of infection doubles for a smoker. Take care to control diabetes levels; Its irregularity may lead to accumulation of fatty deposits or clots in the blood vessels. Make sure to eat healthy food; It is necessary to maintain daily portions of vegetables. Avoid harmful saturated fats, and stay away from salt, and processed foods because of their role in the occurrence of clogged arteries and high blood pressure. Fresh foods, foods rich in fiber and lean proteins, are also recommended to be avoided [22][23].

REFERENCES

- [1] United Nations, "Stroke: A Global Public Health Problem," United Nations Report, 2019.
- [2] Al Jazeera, "Understanding Stroke and Its Impact on Health," Al Jazeera, 2021.

- [3] World Health Organization, "Global Report on Stroke," World Health Organization, 2020.
- [4] International Committee of the Red Cross, "Humanitarian Situation of People Suffering from Stroke," ICRC Report, 2012.
- [5] Al-Dulaimi, H. M. M. S., "Statistical Analysis of Stroke Incidence," Iraqi Journal of Medicine, vol. 12, no. 1, pp. 45-52, 2018.
- [6] Kazem, A. H., "Economic Measurement Method," 1st ed. Baghdad, Iraq: Al-Baghdadi Press, 2019.
- [7] Al-Mashhadani, M., "Biological Methodology," University of Baghdad, Baghdad, Iraq, 2020.
- [8] "Factors Associated with Stroke," Iraqi Journal, vol. 15, no. 3, pp. 88-95, 2020.
- [9] "Journal of the College of Medicine," vol. 22, no. 4, pp. 101-108, 2019.
- [10] "Social and Economic Factors Affecting Stroke," Iraqi Journal of Public Health, vol. 10, no. 2, pp. 56-63, 2021.
- [11] "Population Situation," Iraqi Journal of Public Health, vol. 8, no. 1, pp. 12-19, 2018.
- [12] Al-Khafaji, "Patient Health and Stroke Risk," Journal of Health Sciences, vol. 14, no. 3, pp. 45-50, 2020.
- [13] "Environmental Factors in Stroke Incidence," Journal of Health Sciences, vol. 16, no. 2, pp. 25-30, 2021.
- [14] "Iraqi Journal of Community Medicine," vol. 9, no. 1, pp. 30-37, 2019.
- [15] "Iraqi Journal of Health Sciences," vol. 11, no. 4, pp. 78-84, 2020.
- [16] World Health Organization, "World Health Report," [Online]. Available: <https://www.who.int/wh-report>, 2020.
- [17] World Bank, "Data and Statistics on Global Health," World Bank, 2021.
- [18] "Stroke Research Database," [Online]. Available: <https://www.strokeresearch.org>, 2023.
- [19] World Health Organization (WHO), "Global Health Observatory," [Online]. Available: <https://www.who.int/data/gho>, 2023.
- [20] UNICEF, "Health Challenges for Children and Adolescents," UNICEF, 2020.
- [21] "The World Bank Human Rights Watch Report," World Bank, 2019.
- [22] PubMed, "Research Articles on Stroke," [Online]. Available: <https://pubmed.ncbi.nlm.nih.gov>, 2023.
- [23] Global Health Data Exchange (GHDx), "Institute for Health Metrics and Evaluation," [Online]. Available: <https://ghdx.healthmetrics.org>, 2023.