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Assessment of Stroke Knowledge Among a Sample of Iraqi Adults Individuals Attending AL- Sheikh Zayed Hospital in Baghdad City

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ABSTRACT

Background and Purpose: Stroke is the third leading cause of death in Iraq exceeding only by coronary heart disease and war related death. This study aims to assess the stroke knowledge among a sample of Iraqi adult individuals attending Al-Sheikh Zayed hospital in Baghdad city. **Methods:** This study employed a cross-sectional design for period from 1st October 2020 to 1stApril 2021. A purposive sample of (200) adult individuals Attending AL- Sheikh Zayed hospital in Baghdad City are conveniently selected and included in the study. The data is collected with interview method by using Stroke Knowledge Test Scale. **Results:** The results of the study shows that the majority of the study participants are adults between age of 25- 35-year-old (31%), male (52%), married (60%), smokers (49%), and having sedentary lifestyle (69%). Family history of stroke, hypertension and diabetes mellitus are the common clinical history that is diagnosed among over (50%) of participants. The results also reveal the stroke knowledge is low to moderate over (96%) of participants. Pearson correlation coefficient proved that there is a significant positive association between stroke knowledge and level of education, family history of stroke, high cholesterol level, hypertension and cardiovascular disease. Conversely, there is a significant negative correlation between stroke knowledge and each of age and smoking. **Conclusion:** This study is clinically significant, since it's highlighted the level of stroke related knowledge among a sample of Iraqi adult's people. As well as, the study revealed strong association between stroke knowledge and number of demographical, behavioral and clinical characteristics.

Keywords: *Stroke, Knowledge.*

1. INTRODUCTION

The World Stroke Organization; signaled that more than 13 million new cases of stroke are diagnosis annually worldwide [1]. The seriousness of stroke emerges not only out of its ability to kills its victims (the second leading cause of death worldwide), but also to its capacity to make permanent disability among its survivors. Concerning economic burden, it's estimated that each stroke case cost approximately 140,000 United State dollars [2, 3]. Stroke is the third leading cause of death in Iraq exceeding only by coronary heart disease and war related death. The latest report published by World Health Organization (WHO) in 2018 indicated that stroke related death in Iraq reached 11,205 or 6.53% of total deaths. The age adjusted Death Rate is 75.79 per 100,000 of population ranks Iraq #85 in the world [4]. Aging is the strongest determinant of stroke (approximately, over (75%) of stroke cases worldwide appear in individuals age more than 65 years) [5]. However, stroke is amo

ng a limited number of preventable diseases. Studies reveals that there are more than 10 modifiable risk factors could be used to eliminate over (80%) of stroke causes [2, 3].

Finally, despite the fact that the stroke is a major public health concern, the stroke incidence is continuing to increase every year worldwide [6, 7]. This fact illustrates the importance of enhancing stroke primary prevention programs.

Knowledge is one of the oldest primary prevention strategies. Many studies hypothesized that improving peoples' awareness about stroke will lead them to adopt a lifestyle that minimizes their stroke risks [8-10].

Sullivan and Katajamaki [11] in their study of Stroke education performed a literature review about stroke knowledge that involved articles from 1994 to 2007. This review indicated that stroke knowledge is relatively weak in a wide range of the samples.

In this study, we performed a review to the stroke knowledge studies conducted from 2007 to 2018. Sixteen articles were found in the review, the analysis of articles indicated that (a) stroke knowledge is poor among most of the participants in these studies. (b) most studies used the cross-sectional design with an interview as means for data collection. (c) Some studies attempted to develop specific educational programs to increase public awareness about stroke. Table 1 summarizes the stroke knowledge studies, which have been conducted in the last ten years.

Table 1. Summary of Stroke Knowledge Studies in the Last Ten Years.

Authors	Sample	Methods	Finding(s)
Sit, Yip [10]	adults (n=147)	Quasi-Experimental	The study indicated positive changes in stroke knowledge among the experimental group
Gibson and Watkins [12]	Vascular surgical patients	Qualitative Study	The study revealed that patients use both formal and informal knowledge in decision
Yang, Zheng [13]	Adult (n=1500)	Cross-sectional design	The study indicated that the community residents lacked the awareness of stroke risk
Dombrowski, Mackintosh [14]	Stroke patient's (n = 19)	semi-structured interviews	The study aimed to measure the changes in the stroke knowledge from 2010 to 2015. The majority of participants reported no changes
Haitham, Amr [15]	adults (n= 368)	cross-sectional design	Knowledge of stroke appeared poor among participants.
Zhao, Zhou [16]	Individuals with TIA (n=355)	Repeated Measure Design	The study revealed that the TIA patients with subsequent stroke demonstrated a higher awareness rate of the caution signs of stroke.
Yang, Zhang [17]	General physicians (GPs) and	cross-sectional study	Community GPs and nurses in the urban districts of Chongqing lacked to the knowledge of stroke.
Aycock, Kirkendoll [18]	African Americans	Cross-sectional study	There were no meaningful variations between groups in stroke knowledge.
Kaddumukasa, Kayima [19]	adult (n=377)	cross-sectional survey	Stroke knowledge was inadequate among participants
Riechel, Alegiani [20]	Cerebrovascular patients	survey	The level of stroke risk knowledge was low
Ishigami, Yokota [21]	Children and Parents	Quasi-Experimental	Stroke education aid was effective.
Aldebasi, Alamri [22]	adult (n=2021) Saudi subjects	cross-sectional study	Knowledge was inadequate among the majority of participants.
Metias, Eisenberg [23]	adults (n=1025)	survey	Stroke knowledge has continued stable with no changes overtime.
Farrag, Oraby [24]	Adult (n=1154) form Egypt	cross-sectional study	low public stroke awareness detected among Egyptians

2. METHODOLOGY

Aim of the Study:

This study aims to assess the level of stroke knowledge among a sample of Iraqi adult individual attending Al-Sheikh Zayed hospital in Baghdad city

Design of the study:

This study used a descriptive cross-sectional design period from 1st October 2020 to 1stApril 2021.

Sampling:

The target population for the study were the Iraqi adult individuals in the chronological age of 25 to 65 years' old who are attending Al-Sheikh Zayed Hospital in Baghdad city. A total of 200 individuals purposively and conveniently selected and participated in the study. The exclusion criteria include those individuals younger than 25 years old or those with pervious history of stroke, and severe physical and psychological impairments.

Instrumentation and data collection:

The data collecting is performed by using Stroke Knowledge Test Scale (SKTS). This scale consists of two parts designed to measure the level of stroke related knowledge and as follow [25]:

Part I: This part is used to investigate the participant's socio-demographic characteristics, behavioral habits, and clinical history.

Part II: This part is developed to measure the stoke related knowledge. The part consists of 20 items in multiple choice question format. Each question scored in two levels (0) for wrong answer and (1) for wright answer.

After obtaining the informed consent, the data is collected from the participant by interview method. Each interview takes about 4 to 10 minutes.

Validity and reliability of instrument:

The SKTS demonstrated a good validity and reliability in a number of studies [10,11]. However, for the purpose of this study the validity of the questionnaire is tested by presenting it to (10) experts in nursing and medical fields. According to the expert's recommendations some items are changed and other are modified.

The reliability of the instrument is tested by using data from 10 participants who are excluded from the study. Cronbach's alpha is calculated to determine the internal consistency of the study instrument. The overall internal consistency for the questionnaire was acceptable; α=0.79.

Data analysis:

Frequency and percentage are calculated to describe the participants of the study. Pearson correlation coefficient is used to calculate the correlation between stroke knowledge and participant sociodemographic characteristics. Data are analyzed by using Statistical Package for Social Science (SPSS) for Windows Version 25.

3. RESULTS OF THE STUDY

The Table 2 indicates that the majority of participants in the study are between age group of 25-35 years old (31%). The table shows that obesity and overweight is common among (87%) of participants. Regarding sociodemographic characteristics, the table revels that the majority of participants are male (52%), married (60%) and are graduated (34%). Concerning behavioral habits, the table shows that the 49% of participants are currently smokers and 15% of participants are alcohol drinkers and 69% of participants having sedentary lifestyle.

Clinical History (Diagnosed with)	F	%
Family history of stroke	122	61
Transient ischemic attack	62	31
Hypercholesterolemia	74	37
Hypertension	118	59
Atrial fibrillation	42	21
Diabetes mellitus	84	42
Cardiovascular disease	44	22

Table 2. The Sociodemographic Characteristics, Behavioural habits of the Study Participants

M: mean; SD: Standard deviation, F: Frequency, %: Percentage, BMI: Body Mass Index (<18.5: underweight; 18.5-24.9: normal weight; 25-29.9 over weight; ≥30: obesity).

Table 3. The Clinical History the Study Participants

The Table 3 reveals that Family history of stroke, hypertension and diabetes mellitus are the common clinical history that is diagnosed among over 50% of participants.

Table 4. Level of Stroke Related Knowledge among Participants

Level of Knowledge					
Low		Moderate		High	
F	%	F	%	F	%
11	56.0	80	40.0	8	4.0

F: Frequency, %: percentage, cut of point: Low (1-6), Moderate (7-13), High (14-20)

This table demonstrate that the level of stroke knowledge is low to moderate among over 96% of participants.

Table 5. The Correlation of Stroke Knowledge with the Sociodemographic, Behavioural and Clinical Characteristics of Participants

Variables	Knowledge (*r*)
Age	-.387**
BMI	-.175*
Gender	-.072
Marital status	-.157*
Level of Education	.757**
Smoking	-.258**
Alcohol drinking	-.111
Exercises	.124
Family history of stroke	.391**
History of transient ischemic	-.009
High Cholesterol	.256**
Hypertension	.219**
Atrial fibrillation	.124
Diabetic	.106
Cardiovascular disease	.376**

r: Pearson correlation coefficient, **. Correlation is significant at the 0.01 level (2-tailed)., *. Correlation is significant at the 0.05 level (2-tailed).

The (Table 5) shows the results for Pearson's Correlation Coefficient of the association between stroke knowledge and the sociodemographic, behavioral and clinical characteristics of participants. The table reveals that there is a strong positive correlation between stroke knowledge and each of level of education, family history of stroke, high cholesterol level, hypertension and cardiovascular disease. On the other hand, the table indicates that there is a strong negative correlation between stroke knowledge and each of age and smoking.

Participants Characteristics		Sample (n =200)	
Anthropometric	**Item**	**F**	**%**
Age	25-35	62	31
	36-45	42	21
	46-55	46	23
	56-65	50	25
BMI	<18.5	0	00
	18.5–24.9	44	22
	25–29.9	74	37
	≥ 30	82	41
Demographic	**Item**	**F**	**%**
Gender	Male	104	52
	Female	96	48
Marital status	Married	120	60
	Single	50	25
	Divorced	8	4
	Widowed	22	11
Educational level	Illiterate	12	6
	Write and read	20	10
	Elementary school	58	29
	Intermediate school	20	10
	High school	22	11
	Graduated	68	34
Behavioral habits	**Item**	**F**	**%**
Smoking	Never smoked	90	45
	Currently smoker	98	49
	Stopped smoking	12	6.0
Alcohol drinking	Never	170	85
	1 – 2 times per day	30	15
Physical activity	Sedentary (never)	138	69
	1- 2 days per week	40	20
	1-5 days per week	22	11

4. DISCUSSION

Regarding characteristics of participants, some of the results from (Table 2) were consistent with the Iraqi Ministry of health final report (2016). This report demonstrated the low prevalence of smoking among elderly Iraqi populations, as well as this report proved that hypertension, diabetes mellitus and hypercholesterolemia were most prevalent disease and frequent causes of death among older adults in Iraq [26]

Table 3 manifested that the participant's stroke related knowledge is low to moderate among more than 96% of them. This result reveals the seriousness of stroke and indicate that Iraqi adult individuals are at risk for this terrible health condition. On the bases of this result, it's essential to develop an educational program to enhance stroke related knowledge among Iraqi adult's individuals in order to ensure healthy lifestyle that prevent stroke based on scientific stroke related knowledge. On the other hand, the result of low level of stroke related knowledge is consistent with a

number of studies conducted during last 10 years as mentioned in reviewing of literature in (Table 1).

Concerning the correlation between stroke related knowledge and participant's sociodemographic characteristics, behavioural habits and clinical history, the table 4 shows that there is a strong positive correlation between stroke knowledge and each of level of education, family history of stroke, high cholesterol level, hypertension and cardiovascular disease. This indicate that the higher educational level, the higher stroke knowledge. The stroke knowledge is also increase among those participants who are having a family history of stroke and those with hypercholesterolemia, hypertension and cardiovascular disease. This result may signify the importance of the clinical history in improving stroke related knowledge. On the other hand, the table 4 indicates that there is a strong negative correlation between stroke knowledge and each of smoking and age. This reveals that the older individuals and those who are currently smokers having low level of stroke knowledge.

5. CONCLUSION

Finally, the results of this study can be clinically important, since it highlighted that the stroke related knowledge is low to moderate among Iraqi adult individuals. The study also highlighted the correlation between stroke knowledge and number of individual's characteristics this information could be used to develop an educational program to prevent stroke and adopting healthy lifestyle.

RECOMMENDATIONS:

Based on the study results and its interpretation this study recommends the following:

1. Conducting additional studies to measure the level of stroke related knowledge among Iraqi People.
2. Develop an educational program to improve stroke related knowledge among Iraqi Population.

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