

# Nurses' Knowledge Regarding Risk Factors And Management Of Stroke At Rajshahi Medical College Hospital, Bangladesh

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**Abstract:** The study was carried out with a view to assess the nurses knowledge regarding the risk factors and management of stroke following a cross type descriptive study. Nurses having academic qualification were S.S.C (32%) and H.S.C (68%). Nurses having professional qualification were Diploma in Nursing & Midwifery 50% because this degree was compulsory and basic for all. During the data collection there were also 42% B.Sc. in Nursing and 8% MPH/M.Sc. among those respondents. Length of Service of the respondents (nurses) were 6% (1 to 10 years), followed by 24%, 58%, & 12% were in the (11 to 20 years), (21 to 30 years) and (31 to 40 years). The Nurses were given correct answer about 74% knowledge regarding stroke, 50% types of stroke, 82% controllable risk factor of stroke, 76% uncontrollable risk factor of stroke, 85% positioning needed for patients and 86% management of stroke. Considering the above discussion it was obviously clear that the Senior Staff Nurses (SSN) were much conscious regarding the risk factors and management of stroke working at Rajshahi Medical College Hospital (RMCH).

**Key Words:** Nurses'; Knowledge; Risk factors; Management; Stroke; Rajshahi; Bangladesh

## 1 Introduction

Stroke is defined as "rapidly developed clinical signs of focal or global disturbance of cerebral function, lasting more than 24 hours or until death, with no apparent non-vascular cause" [1]. Stroke is a leading cause of disease and death throughout the world [2]. Brain cell function requires a constant delivery of oxygen and glucose from the bloodstream. A stroke occurs when blood supply to part of the brain is disrupted, leading to inadequate oxygen supply and causing brain cells to die. Blood flow can be compromised in a variety of ways. Stroke is also referred to as cerebrovascular accident (CVA) [3]. Age is the number one risk factor for stroke with steep increases in incidence rates with increasing age and higher rates in men than in women in all age groups. Stroke incidence varies across ethnic groups with higher incidence rates in black people compared with white populations, also when adjusted for differences in socioeconomic status. There is a socioeconomic gradient in the incidence of stroke with lower levels of socioeconomic status associated with a higher risk of stroke [4,5]. Modifiable risk factors have been identified as leading risk factors contributing to global mortality and global burden of disease. Of those, the following are associated with stroke: high blood pressure, tobacco smoking, low fruit and vegetable intake, high body mass index (BMI), physical inactivity, and a high consumption of alcohol. Also, abdominal obesity has been shown to be strongly associated with stroke independent of BMI [6].

High blood pressure is one of the most important modifiable risk factors for stroke with the risk of stroke increasing continuously with increasing levels of blood pressure. This increased risk is found in levels above 115/75 mm Hg. The prevalence of hypertension increases with increasing age, and hypertension is more common in men than in women in all age groups. Diabetes is a risk factor for stroke with risk of stroke increasing continuously with blood glucose concentrations even below levels set for borderline diabetes [7]. Stroke usually presents with an acute loss of brain functions. These functions usually involve the realm of motor, sensory, language, vision, visuospatial perception or consciousness. Most ischemic strokes presents as a sudden loss of function in one of the above domains. However, a sudden loss of neurological functions in the above domains could represent pathologies other than ischemic stroke. These include intracranial hemorrhage, seizures, vasovagal syncope, migraine, tumor, meningitis etc. Clinical examination along with neuroimaging secures a proper diagnosis of stroke [8]. The purpose of this study is to find out the knowledge about risk of stroke and its management of nurses at Rajshahi Medical College Hospital, which might provide us and the concern people a comprehensive picture about risk factors of stroke and its management, we can prevent development of stroke in early stage and can provide management of complications of stroke.

## 2 Material & Method

The descriptive cross sectional was used to explore the nurses' knowledge regarding risk factors and management of stroke for hospitalized patients in Bangladesh. The study was conducted at Rajshahi Medical College Hospital (RMCH), a 1200-bed tertiary level teaching hospital, which is located in Rajshahi Metropolitan city of Bangladesh. Approximately 450 patients per day are admitted in this hospital. The study was carried out from December 2013 to April 2014. Total number of nurses working in this hospital were 375. The study was conducted in 6 wards under 2 selected unit was neuro-medicine and medicine unit. Fifty nurses interviewed questionnaire with a response rate of 100%.

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### 3 Results & Discussion

The results regarding nurses knowledge regarding risk factors and management of stroke has been presented below.

#### 3.1 Socio Demographic information of the Nurses

Fifty nurses are selected for the study, the age of respondent are 30-40 years 36%, 41-50 years 46% and 51-60 years 18%. The sex of the respondent is Male 10%, Female 90%. The religion of respondent is Muslim 84%, Hindu 12%, Christian 4%. The marital status of respondent are unmarried 4%, married 96%.

**Table 1: Demographic information of the participated nurses**

Variable	Parameter	Frequency	Percentage
Age (years)	30-40	18	36
	41-50	23	46
	51-60	9	18
Sex	Male	5	10
	Female	45	90
Religion	Muslim	42	84
	Hindu	6	12
	Christian	2	4
Marital status	Unmarried	2	4
	Married	48	96

#### 3.2 Qualification & Experience of the Respondents

The demographic table, there selected academic qualification, S.S.C 32%, H.S.C 68%. Professional qualification- Diploma in Nursing & Midwifery 50%, B.Sc. in Nursing 42%, MPH/M.Sc 8%. Length of service 1-10 years 6%, 11-20 years 24%, 21-30years 58%, 31-40 years 12%.

**Table 2: Qualification and experience of the respondents**

Variable	Parameter	Frequency	Percentage
Academic qualification	S.S.C	16	32
	H.S.C	34	68
Professional qualification	Diploma In Nursing & Midwifery	21	50
	B.Sc. in Nursing	25	42
	MPH/M.Sc	4	8
	1-10	3	6
Length of service	11-20	12	24
	21-30	29	58
	31-40	6	12

#### 3.3 Nurses knowledge and management of Stroke patient at Rajshahi Medical College Hospital.

Table no.3 and question no. 1. shows that the knowledge about what is stroke in question no a) rapidly developed clinical signs of focal or global disturbance of cerebral function, Yes 98% and No 2%. In question b) lasting more than 24 hours or until death, with no apparent non-vascular cause, Yes 80% No 20%. In question c) stroke is a leading cause of disease and death throughout the world, Yes 68% & No 32%. In question d) lasting less than 24 hours, Yes 48% & No 52% and in question e) when blood supply to part of the brain is disrupted, leading to inadequate oxygen supply and causing brain cells to die, Yes 76% & No 24%.

**Table 3: Distribution of the respondent by their knowledge on what do you mean by stroke**

Variables	Yes	
	n	%
(a) Rapidly developed clinical signs of focal or global disturbance of cerebral function	49	98
(b) lasting more than 24 hours or until death, with no apparent non-vascular cause	40	80
(c) Stroke is a leading cause of disease and death throughout the world	34	68
(d).Lasting less than 24 hours	24	48
e)when blood supply to part of the brain is disrupted, leading to inadequate oxygen supply and causing brain cells to die.	38	76

In table No.4 and question no. 2. which are the controllable risk factors of stroke, a) high blood pressure Yes 100% No 0%, b) alcohol and smoking Yes 90% No 10%, c) high cholesterol Yes 78% No 22%, d) transient ischemic attacks Yes 26% No 74%, e) Diabetes Yes 68% No 32 %.

**Table 4: Risk factors of stroke**

Variables	Yes	
	n	%
a) High blood pressure	50	100%
(b) Alcohol and smoking	45	90%
(c) High cholesterol	39	78%
(d) Transient Ischemic attacks	13	26%
(e) Diabetes	34	68%

In table no. 5 and question no. 3. which are the uncontrollable risk factors (a) age Yes 94% No 6%, (b) gender Yes 86% No 14%, (c) family history Yes 76% No 14%, (d) overweight Yes 34% No 24%, (e) none of above Yes 10% No 90%.

**Table 5: Uncontrollable risk factors**

Variables	Yes	
	n	%
a) Age	47	94%
b Gender	43	86%
c) Family history	38	76%
d) Overweight	17	34%
e)None of above	5	10%

In table no. 6 and question no. 4. in acute stroke which positioning is needed, a. prone Yes 32% no 68%, b. semiprone Yes 96% No 4%, c. fowler Yes 22% No 78%, d. all of above Yes 4% No 96%, e. none of above Yes 10% No 90%.

**Table 6: In acute stroke which positioning is needed**

Variables	Yes	
	n	%
a.Prone	16	32%
b.Semiprone	48	96%
c.fowler	11	22%
d.All of above	2	4%
(e)None of above	5	10%

Table no. 7. show the respondent by their knowledge about which are the management of stroke, 86% have maximum knowledge.

**Table No 7: Distribution of the respondent by their knowledge about which are the management of stroke.**

Variables	Yes	
	n	%
a.ABC management	49	98%
b.Positioning-Semiprone	48	96%
c.Fluid management	47	94%
d.Hypothermia-aggressive treatment	18	36%
e.Hyperthermia-aggressive treatment	12	24%

#### 4 Conclusion

This study provided vivid information about Nurses knowledge regarding risk factors and management of stroke patient at Rajshahi Medical College Hospital. Though this was a cross-sectional type of descriptive study, yet this work strived to depict a comprehensive picture on the nurse's knowledge regarding risk factors and management of stroke patient which is very much important to improve the health of the adult population. A total of 50 nurse's were interviewed. The first 24 hours after stroke onset is a critical phase in which the potential for neurological improvement are maximal. The process of neuronal death starts at the onset of thrombotic occlusion and may continue for hours or possibly days. Once dead, neurons cannot be re-generated. Therefore, reversal of neuronal damage is extremely important during the very early hours after the onset of stroke. To have a good structure in the stroke care following a programme appears to be necessary. At the present time, there is no developed national stroke nursing programme in Bangladesh. It would be a great advantage to have a research-based national programme that could be used at nurse-led clinics. To make good teamwork possible, the national programme could then be further developed and applied, according to local circumstances, in collaboration with the physicians at the health centers. Team-work is valuable for the patients and gives confidence to both the health-care personnel and the patient, as the patient receives the same information and meets the same attitude from both the physician and the nurse. Lifestyle changes, from the first contemplation of a need for change to actual action, sometimes take several years. It is then very important to be aware of this when deciding on when to perform evaluations of the care.

#### 5 Acknowledgements

The principal author is thankful to Prof. Dr. M. Khalaquzzaman, Department of Zoology, University of Rajshahi, whose active supervision and suggestions help me to complete this thesis. Also would like to express profound sense of gratitude to Mrs. Sadeka Khatun, Principal, Rajshahi Nursing College, for her genuine concern. Provide special thanks to all respondents (Senior Staff Nurses) at Rajshahi Medical College Hospital who participate actively and co-operate in data collection procedure.

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