

Potential for a comprehensive stroke education: Assessing awareness about stroke among community health workers - A qualitative study from Urban Bangalore, Karnataka, India

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ABSTRACT

Context: The incidence of stroke is evolving to be a major public health issue in recent years. The situation is aggravated by the limited public awareness about its risk factors and treatment procedures. It is important to explore the level of awareness of the Accredited Social Health Activists (ASHAs) about stroke as they work in the community as part of the public healthcare delivery systems. **Aims:** The aim of this study was to explore the awareness about stroke among the ASHAs through a qualitative study. **Settings and Design:** The study was conducted in the institution using a cross-sectional qualitative approach. **Methods and Material:** A focus group discussion with 12 ASHAs from Bengaluru district of Karnataka was conducted. **Statistical Analysis Used:** Data were analyzed manually through direct content analysis. **Results:** It was revealed that the ASHAs did not have adequate general awareness about stroke, its causes, and related treatment procedures. The ASHAs overgeneralized the causes to lifestyle factors, such as smoking, drinking, and so on. **Conclusions:** The study showed the level of awareness of stroke among the ASHAs is inadequate at present, and they would benefit from systematic sensitisation programmes. Limited awareness could lead to failure to identify the early warning signs and appropriate, timely help. A need of a comprehensive educational program to increase their awareness is emphasized.

Keywords: ASHAs, community health workers, stroke, stroke awareness

Introduction

Stroke is characterized by the death of brain cells occurring mostly due to inadequate oxygen level usually due to interruption in the flow of blood or arterial rupture in the brain. Some of the common symptoms in stroke are weakness, loss of speech, and paralysis. According to statistics, stroke happens to be the second leading cause of death and the third leading cause of

disability, as mentioned by World Health Organization (WHO).^[1] Stroke, as a neurological disease, is a major public health concern, because, the range of residual disabilities it comes along with, makes the victim completely dependent physically, along with a visible decline in the cognition. Having said that, it is not so that the treatment options are not available for a person with stroke. Over the past years, the science of stroke care has undergone a lot of medical advancements.^[2]

According to the 2017 Global Burden of Disease by WHO, Stroke is ranked as the third leading causes of early death. It accounted for more than 1 million death in 2017. Stroke also

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ranks third in the leading cause of disability and death according to the Global Burden of Disease, 2017, by WHO. If this pattern continues, stroke will rise up to be the second in rank, as the leading cause of early death by the year of 2040.^[3] Thus, stroke has become a public health challenge. The stigma and inadequate knowledge stand as a hurdle in early detection of the disease, which delays prompt treatment, in turn.

Talking from the Indian context, according to the 50 years of stroke researches in India, it can be said that the incidence of stroke is comparatively higher in here than the Western countries.^[4] One of the main reasons of so are the prevalence and inadequate control of the risk factors, such as smoking, diabetes and hypertension, throughout the country because of little or no awareness among the public.^[4] Public awareness and proper practises can somewhat reduce the burden of stroke being a public health concern.^[5] Lack of proper knowledge and awareness leads to delayed admission in the hospital leading to death and high degree of disability of the patient.^[6] Moreover, certain risk factors such as hypertension and its treatment along with appropriate lifestyle changes can help prevent the incidence of stroke. It is important to note that preventive measures help in risk reduction of stroke which again has more cross-cutting advantages.^[7]

The issue of public awareness with respect to stroke is seen as a hurdle in various developing countries. For instance, a study conducted in Nigeria to assess the knowledge and awareness of stroke among the Shikha community of Kaduna state showed that the public knowledge about the risk factors in stroke was relatively poor.^[8] Similar community-based study assessing the stroke literacy in Southern Brazil revealed that the public knowledge about stroke is quite scarce even among people having above average level of formal education.^[9]

Early treatment and intervention in any form of disease is always beneficial. A study showed that if proper treatment protocol is followed, patients who are exposed to treatment in 0–90 min of the first onset of stroke have increased changes of improvement within 24 h of the treatment received compared to patients receiving treatment after 90 min.^[10] It is also seen that the neuroprotective drugs used for the treatment of stroke are most effective at the early administration.^[11] Early intervention is possible when caregivers bring patients with stroke for immediate medical assistance early in the onset of stroke. However, this usually does not happen because of inadequate understanding and accessibility to services. Knowledge and awareness about stroke, the incidence of which has grown to be a major public health issue is still shallow in a developing country like India. One of the efficient ways to increase public awareness about stroke is through the health workers and health activists because they work in close contact with people in the community. A study aimed to evaluate the knowledge and attitude toward stroke among workers in Cairo University Hospital revealed limited level of knowledge among the hospital workers.^[12] Similar knowledge gap was also seen

among the hospital workers in an African community.^[13] The Accredited Social Health Activists (ASHAs) are women who are trained community health activists who work in primary healthcare centers in India. They are usually recruited from the villages and they work in the village community in collaboration with the public health systems.^[14] They act as a link between the community and health experts as they help people in the community to seek the initial medical help. Knowledge and awareness about major public health challenges like Stroke among the ASHAs is undoubtedly important as they can encourage the common people in public to seek early treatment in the community. Not only this, the ASHAs happen to be the first contact in the community when the patient goes back home after the treatment procedure. Thus, the ASHAs can guide the caregivers and patients with respect to their post-treatment rehabilitation program as well. This study is aimed at exploring the awareness of stroke among these ASHA workers in Bengaluru city of Karnataka state using a qualitative approach.

Subjects and Methods

Design

This was a cross-sectional qualitative study aiming to explore the awareness of stroke among the ASHA workers. The study was approved by the Institute Ethics Committee.

Sample

In total, 12 ASHAs participated in the study from the Bengaluru district of Karnataka state. The ASHAs in the sample were selected through purposive sampling. Informed consent was provided by the participants of the study.

Procedure

A focus group discussion (FGD) was conducted for the ASHAs in Kannada to explore their level of awareness about stroke. The FGD lasted for an hour and a half. The FGD was conducted by the investigators who were experienced with qualitative research study. The investigators prepared the guide for the FGD incorporating various questions covering the broad topics of general awareness, causes, and treatment procedures related to stroke. The topic of general awareness included prompts related to how common the disease is, and who are more susceptible to the same. Topic of causal factors included prompts assessing the ASHAs' knowledge about the risk factors along with the possible predisposing factors of stroke and how can they be prevented, if they can be prevented at all. Finally, the topic of treatment procedures included prompts as to whom to approach and when to approach with respect to treatment of stroke and how beneficial can they be both in short and long run. The prompts were used as guide in the discussion, and the discussion followed the specific topics that came up from the group. The discussion was transcribed and manually analyzed for emerging themes.

Results

Theme 1: General awareness about stroke

The ASHA workers expressed little knowledge about stroke in general. Most of them ($n = 10$) were of the opinion that stroke is a very rare disease and occurs mostly among the elderly population. It is not seen much among the young and middle-aged population. Some of the ASHAs ($n = 8$) also opined that it is mostly men who become victims of stroke and women generally do not develop the risk. The ASHAs expressed that the occurrence of stroke is very hard to identify and were not sure as how to identify, what symptoms to notice and thus nothing can be done in case a person is having an episode of stroke, as the onset is sudden. Thus, it is seen that the ASHA workers were not really aware of the symptoms of stroke in general and where not sure when to seek medical assistance.

Theme 2: Awareness about causal factors of stroke

The ASHA workers were seen to overgeneralize the causal factors that can lead to stroke. Few of them [$n = 4$] expressed that smoking and drinking can lead to stroke later in life. This was the prime reason why ASHAs believed that men are more susceptible to stroke than women, because they assumed that, in general, men are more seen to give in to the habits of smoking and drinking when compared to women. It was also mentioned that women tend to live longer than men, and since the risk of stroke increases with age, it is the men who have it. Some of them ($n = 6$) attributed to probably taking stress and tension and not eating nutritious food as the causes of stroke. An interesting thing to note here is, few of the ASHAs expressed that stroke usually takes place in the heart, attributing heart disease as one of the causes of the disease. This happens to be an interesting belief which is actually contrary to the fact that stroke occurs in the brain. The heredity factor in the causes of stroke was absent according to what the ASHAs believed. Few of them ($n = 5$) believed that stroke can also be inevitable and were not sure what causes it and can occur to someone without any underlying factor. They also felt it could be something beyond health reasons, maybe one is destined to get it, not taking care of health or overworking oneself.

Theme 3: Awareness about treatment for stroke

The ASHAs expressed that they do not think any proper treatment procedure is available for stroke. This opined that patients with stroke are usually bed-ridden and have bleak chances of living life to their fullest. Some of the ASHAs ($n = 7$) expressed that, should there be any form of treatment procedure to reduce the discomfort and pain in stroke, one must take help from Ayurveda instead of allopathy. Hot oil massage can help ease the discomfort and pain a person experiences who is affected by stroke. Natural ayurvedic herbs can be of some help, although the ASHAs were unsure of how can they help. Few of the ASHAs ($n = 3$) expressed that stroke and its occurrence can reduce by praying to God and following some religious practices like doing ceremonial rituals and going to temple and that god

is the only saving grace. The ASHAs, in general, believed that when a person is having an episode of stroke nothing can be done and there is no form of immediate medical help. There was no mention of healthy lifestyle changes to prevent the occurrence of stroke. Some of the sample quotes by the ASHAs are mentioned in Table 1.

Discussion

This study was aimed at exploring the awareness of stroke the ASHA workers had as they happen to be the first contact with people in the community.

The results of the study reveal that the ASHA workers did not have much awareness about stroke, in general, its symptoms, and causal factors and the need of medical assistance and treatment procedure regarding the disease. The ASHAs thought that stroke is a very rare disease and occurs mostly among the elder population. However, the fact is that stroke just does not occur in old age and can happen in anytime of a person's lifespan. The ASHAs were not really aware of the symptoms to identify a person with stroke and assumed that the person undergoes a lot of pain and discomfort. Similar finding was found by Shafae *et al.* in their study on Perception of Stroke and Potential Risk Factors among Omani Patients at Increased Risk for Stroke. In their study, a total of 32% of their subjects were not aware of the warning symptoms of stroke.^[15]

When it comes to the awareness of the causes of Stroke, most of them attributed it to hypertension, lack of nutritious food, smoking, and drinking. A number of earlier studies, exploring the perception and knowledge about Stroke of the community, yield similar results.^[8,16] The ASHAs assumed that since men happen to give in to smoking and drinking as compared to women, the former are at more risk of having stroke than women. According to the ASHA workers, stroke happens in heart. This is actually not true because the organ which is affected in stroke is actually the brain. The ASHAs did not mention the heredity or genetic component in regard to the risk factor of stroke. In reality, people having a family history of stroke are more susceptible to have

Table 1: Sample quotes by accredited social health activists (ASHAs) with respect to various themes of stroke awareness

Themes	Sample quotes by ASHAs
Theme 1: General awareness of Stroke:	"I think men have this disease more, because they smoke and drink. It is not seen much in women."
Theme 2: Awareness about Causal Factors of Stroke:	"Smoking and drinking can lead to stroke later in life at old-age." "Any heart disease can lead to stroke as it happens in heart itself"
Theme 3: Awareness about treatment for stroke:	"Ayurvedic oil massage can relieve some amount of pain temporarily" "What can be done in such a condition? Patient becomes completely bed-ridden and has no life at all. God only can help in such condition"

the same compared to others. However, this does not mean that a person will have stroke; in case, someone has a history of it in his family, it just means that he may be at risk.

The ASHA workers had quite limited knowledge about the treatment procedures of stroke. They assumed that there is no definite treatment that can help a person with stroke and he has to be bed-ridden for the rest of his life. They believed in hot massage and ayurvedic treatment for temporary relief. In a typical study, surveying the knowledge and awareness about Cerebro-vascular Stroke of Mangalore population, it was seen that 41% of the sample believed in Ayurveda and massage techniques to be the possible treatment method for stroke.^[17] Few of the ASHAs did mention about performing religious rituals, praying to God and going to the temple may help a person with stroke get better. Similar findings were seen to evolve from a study in the African community assessing the knowledge and perception of stroke among hospital workers. The study revealed that the knowledge of hospital workers with respect to treatment choices for stroke were considerably influenced by cultural and religious beliefs.^[13]

The importance of health education especially among ASHA workers to raise awareness about stroke is highlighted through the study. The ASHAs are the torchbearers of good and holistic health among the people in the community. They can help persons with stroke right from early identification to proper rehabilitation so that the disability is minimized and functionality is maximized. It is important to develop a comprehensive sensitization program to educate the ASHA workers and create an awareness about stroke, its causes, preventive measures, and treatment procedures.^[13]

Implication

The study explains in details about the need for awareness among the ASHA workers with respect to stroke. There is a need of developing a proper sensitization program about stroke, for increasing the awareness of the ASHA workers. The ASHAs are the torchbearers of health awareness in the community. They should be educated about the causes, risk factors, symptoms, and the treatment procedures with respect to stroke, so that the public is aware of the same in the community. Awareness of the treatment procedures, rehabilitation measures along with the preventive measures with respect to stroke should reach the public. Once the knowledge about stroke among the ASHAs is strengthened, they will be more aware of the importance of its early treatment procedures as well as its preventive measures. Finally, if knowledge and awareness are strengthened, their practices with regard to guiding the people in the community in the right direction can bring a huge and positive change in the treatment turn-ups of patients with stroke. Further, the stroke education programs would also address the care needs of those who had developed disability due to stroke and have high support needs. Community-based rehabilitation is the answer to many difficulties in reintegration of the persons with disabilities in our country. ASHAs form an important link between the families

who provide care and the institutions, as well as become agents of education. This way the public will come forward to avail treatment for stroke. The only way to educate the public is through ASHA workers.

Conclusion

The study vividly exhibits the gap in the knowledge and awareness about stroke among ASHA workers. This could lead to poor recognition and treatment with regard to stroke. There is an immediate need to increase the knowledge about stroke in a form of awareness intervention among the ASHA workers as they are the first contact with the common people in the community. This can help in minimizing disability and increasing functionality in persons with stroke.

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Conflicts of interest

There are no conflicts of interest.

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