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Mini- Review

Quality of Life of Nigerian Stroke Survivors and Its Determinants

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ABSTRACT

The disability caused by stroke could lead to significant decline in the level of functioning and deterioration of quality of life (QoL). QoL assessment could be used to evaluate the impact of stroke, assist in planning effective treatment, appraise efficacy of stroke rehabilitation, and evaluate cost effectiveness in order to justify expenditures on health care. This article reviewed the QoL of Nigerian stroke survivors and also identified its determinants. More than 70% of the studies on QoL of Nigerian stroke survivors have been conducted the in South Western part of Nigeria, and few from other parts of the country. The reported mean ages of stroke survivors in the published studies ranged between 54.40 years and 62.8 years. Stroke has moderate impact on QoL of Nigerian survivors, though they experienced lower QoL than their apparently healthy counterparts. The physical, social and emotional domains of QoL were all affected. Language and vision domains were however least affected. Stroke severity, disability and depression are the important predictors of QoL among Nigerian stroke survivors. The influence of motor recovery on QoL of Nigerian stroke survivors in the acute and sub-acute stages of recovery is subject to further research.

Key word: *determinants, quality of life, stroke, Nigeria*

INTRODUCTION

Stroke is a recognized chronic illness and a cause of long term disability (Mayo et al, 1999; Patel et al, 2006; Opara and Jaracz, 2010). Unlike other disabling conditions, its sudden onset usually leaves the survivors and caregivers ill prepared to deal with its sequelae (Mayo et al, 1999). The long-term disability caused by stroke could lead to significant decline in the level of functioning and deterioration of quality of life (QoL) (Opara and Jaracz, 2010). QoL is an indicator of complete sense of health, well-being (Karen et al, 2008), and life satisfaction (Youssef and Wong, 2002). It is a global concept with diverse philosophical, political and health related definitions (Fallowfield, 2009). The term QoL is defined as 'an individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns' (WHOQOL Group, 1996). Health-related QoL includes the physical, functional, social and psychological well-being (Testa and Simonson 1996; Fallowfield, 2009). The increase in the number of people surviving stroke has advanced the emphasis of stroke management from "adding years to life" to "adding life to years" (Van den Bos, and Triemstra, 1999). Therefore, one of the goals of stroke rehabilitation is to better the health-related QoL of

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survivors in order to enable them fulfill their aspirations (Owolabi, 2011).

Benefit of assessment of quality of life

Quality of life assessment is commonly incorporated in the overall evaluation of the impact of stroke (Opara and Jaracz, 2010). This could help both in knowing the areas in which a patient is most affected by the disease and in planning effective therapeutic and rehabilitative interventions (WHOQOL Group, 1996; Owolabi 2008; Tengs et al, 2001). Furthermore, measurement of QoL provides a meaningful way to evaluate the efficacy of stroke rehabilitation (de Haan et al, 1993; WHOQOL Group, 1996; Pickard et al, 1999; Burckhardt and Anderson 2003; Akinpelu and Gbiri 2009). It could also be used to evaluate the effectiveness of new health interventions (Testa and Simonson 1996). Assessment of changes in QoL in the course of care may enable the evaluation of cost effectiveness in order to determine whether expenditures on health care are justified (Testa and Simonson 1996). A Comprehensive QoL assessment will facilitate a broader description of a disease (Abubakar and Isezuo, 2012) and a range of problems that affect the patients that are equally important to patients' perspective (Shdaifat and Abdul-Manaf, 2012). Therefore assessment of QoL is very important in health care practice and research.

A decade before now there were very few or no published studies on quality of life of stroke survivors in Nigeria, but with the increasing interest in providing holistic and patient centered care, a number of published studies on quality of life of stroke survivors in Nigerian have increased in recent times. This review hopes to guide the intending researcher on the volume of studies that have been conducted, so far, to bring to light the factors influencing QoL of Nigerian stroke survivors and aspects of QoL that are most affected by the disease. This review identified a total of 14 studies published between 2007 and 2014 and most of the studies 10(71.4%) were conducted in the South Western part of Nigeria, 2 (14.3%) in the North West, 1(7.1%) in South East, and 1(7.1%) was conducted in South South region of Nigeria (table 1). The reported mean ages of stroke survivors in the studies ranged between 54.40 years and 62.8 years.

Assessment of QoL among stroke survivors in Nigeria

QoL can be assessed with either generic or condition specific outcome measures. Generic instruments are designed to evaluate QoL in all population sub-groups, whereas condition-specific instruments are designed to assess the QoL of only one specific group for example, stroke survivors (Davis and Waters 2010). Our review of literature observed that valid and reliable generic and condition specific QoL instruments with sound psychometric properties have been used to assess the QoL of Nigerian stroke survivors. It was further observed that more than 70% of the studies used condition specific QoL instruments. The generic QoL instruments include the World Health Organization QoL questionnaire (WHOQoL-Bréf) (Fatoye et al, 2007; Hamzat and Peters, 2009), Comprehensive Quality of Life Adult questionnaire (Akinpelu and Gbiri 2009) and the SF-36 (Owolabi, 2010).

Table 1:
Analysis of studies on quality of life of Nigerian stroke survivors

Variables	Frequency (%
Distribution of published studies based on Nigerian geopolitical zones	
South West	10 (71.40%)
North West	2(14.30%)
South East	1(7.10%)
South South	1(7.10%)
Commonly used Quality of life	
Disease specific instruments	
Stroke Specific Quality of Life	4 (26.70%)
Health Related Quality of Life in	4(26.70%)
Stroke Impact Scale	2(13.30%)
Newcastle Stroke Specific Quality of Life measure	1(6.70%)
Generic instruments	
W.H.O. Quality of Life instrument	2(13.30%)
Comprehensive Quality of Life	1(6.70%)
SF 36	1(6.70%)
Research designs used	
All are prospective studies	14(100%)
Cross-sectional surveys	9(64.3)
Longitudinal studies	4(28.60%)
Explorative correlational	1 (7.1%)
Experimental designs*	0(0%)
Consistent determinants of quality	
Motor/functional impairment	3(15%)
Disability	4(20%)
Depression	4(20%)
Stroke severity	4(20%)
Emotional disorder and	3(15%)
Social and spousal support	2(10%)

*none of the studies assess the effect of any healthcare intervention on quality of life

The condition specific QoL instruments include the health related QoL in stroke patients (HRQOLISP) (Owolabi 2008; Owolabi 2010; Owolabi 2011; Owolabi 2013), the Stroke-specific QoL scale (Gbiri et al, 2010; Akinpelu et al, 2012; Gbiri and Akinpelu, 2012; Akosile et al, 2013), the stroke impact scale (Abubakar and Isezuo 2012; Hamza et al, 2014) and the Newcastle Stroke Specific QoL (Enato et al, 2011) as presented in Table 1.

The Quality of life of Nigerian stroke survivors

Studies have shown that Nigerian stroke survivors experienced a fairly moderate QoL (Enato et al, 2011; Akosile et al, 2013), because their QoL is not too severely affected by stroke event (Akosile et al, 2013). It was found however that stroke survivors in Nigerian have lower QoL than their apparently healthy adults counterparts (Fatoye et al, 2007; Akinpelu and Gbiri 2009; Owolabi 2011). The areas of quality of life most severely affected by stroke are the "social" and "family" roles (Akosile et al, 2013), physical functioning (Owolabi 2011; Akosile et al, 2013) and "work" (Akinpelu et al, 2012) "feeling" (Enato et al, 2011), and "emotion" domains (Hamza et al 2014). This implies that the physical, the social and the emotional domains of QoL are all affected. On the other hand, "language" (Akinpelu et al, 2012; Akosile et al, 2013) "vision", (Enato et al, 2011; Akosile et al, 2013) "thinking" and "mood" domains (Akosile et al, 2013) are least affected, while the spiritual sphere is stroke-resilient (Owolabi 2011).

Functional recovery and quality of life of Nigerian survivors

Prospective longitudinal studies have found that Nigerian stroke survivors experienced significant recovery of functional abilities from stroke onset up to six months (Hamzat and Peters, 2009) and beyond 6 months (Hamza et al, 2014). Furthermore, Abubakar and Isezuo (2012) found that more than half of stroke survivors had good recovery. The recovery of motor function in the first six months post stroke could not however, translate into significant improvement in QoL (Hamzat and Peters 2009). In the same vein, another study by Akinpelu and Gbiri (2009) found no relationship between motor performance and QoL. On the contrary, QoL was found to improve significantly from stroke onset to 6 months but non-significantly from 6 months to 12 months (Gbiri and Akinpelu, 2012). Another dissimilar result was obtained by Hamza et al (2014) who found that significant changes occurred in the QoL of stroke survivors from 6 months to 1 year. Hence it is very obvious that the changes that occur in the QoL of Nigerian stroke survivors from the stroke onset up to 1 year post stroke did not follow any predictable pattern unlike the recovery of function. Therefore, the influence of functional recovery on quality of life of Nigerian stroke survivors in acute and sub-acute stages of recovery is subject to further research.

Factors influencing quality of life of Nigerian stroke survivors

Studies have shown that QoL of stroke survivors in Nigeria is consistently influenced by stroke severity (Owolabi 2008; Gbiri et al, 2010; Owolabi 2010, Owolabi, 2013), motor impairment (paresis), (Fatoye et al, 2007; Hamza et al 2014), disability (Owolabi 2008; Owolabi 2010; Abubakar and Isezuo, 2012; Hamza et al 2014) and Depression (Gbiri et al, 2010; Abubakar and Isezuo, 2012; Gbiri and Akinpelu, 2012; Hamza et al 2014) table 1. Other determinant of QoL post stroke include: acuteness of the condition (Fatoye et al, 2007), level of social support (Owolabi 2008), emotional responses (Owolabi 2008; Owolabi 2010), cognitive impairment and previous psychiatric illness (Fatoye et al, 2007), level of educational-attainment (Fatoye et al, 2007; Gbiri et al, 2010; Gbiri and Akinpelu, 2012), marital status and spousal support (Gbiri et al, 2010; Gbiri and Akinpelu, 2012) and occupational status (Gbiri and Akinpelu, 2012). Socioeconomic class (Owolabi 2008; Owolabi 2010) was however, not associated with quality of life while conflicting results were obtained on the influence of stroke type on quality of life. Gbiri et al (2010) found that haemorrhagic stroke survivors had significantly higher QoL at post-stroke periods but Owolabi (2010) and Owolabi (2008) found no significant association between stroke type and QoL.

Therefore, stroke severity, disability and depression are the important predictors of QoL among Nigerian stroke survivors. Factor such as level of social and spousal support and cognitive function also predict QoL.

Influence of gender and age on QoL of Nigerian survivors

A study found that the effect of stroke on quality of life is similar for survivors of both gender (Akosile et al, 2013). Similar studies have shown that the gender of stroke survivors had no influence on their QoL (Fatoye et al, 2007; Owolabi 2008; Owolabi 2010). But on the contrary, Enato et al, (2011) found that Nigerian women had significantly poorer QoL when compared to men based on activities of daily living. The disparity in the results obtained could be due to the difference in the domains of QoL investigated. Though there is tendency towards having similar QoL for survivors of both genders, the influence of gender on QoL stroke survivors in Nigeria is still not very clear. Similarly, Gbiri and Akinpelu, (2012) and Gbiri et al, (2010)

found that QoL of Nigerian stroke survivors is negatively influenced by their age. Another study observed however that age has no significant influence on QoL of stroke survivors (Fatoye et al, 2007). It will be difficult to draw any conclusion on the influence of age on quality of life of stroke survivors in Nigeria since the results are very scanty. This area is therefore a subject of further study.

Finally, to date there is no single intervention study from Nigeria that assesses the effect of any specific treatment on the quality of life of Nigeria stroke survivors. Majority of the published studies are cross-sectional surveys.

Conclusion

Stroke has moderate impact on quality of life of Nigerian survivors, though they had experienced lower QoL than their apparently healthy counterparts. Stroke severity disability and depression are the important predictors of QoL among Nigerian stroke survivors

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