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The relationship between occupational performance and well-being of stroke survivors: A cross-sectional study

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Abstract

Stroke is a remarkable event that often causes serious physical, psychological, cognitive and social impairments. Occupational therapy is a patient-centered health care profession that focuses on an individual's occupational performance and well-being by minimizing the impairments that prevent individuals with functional limitations from ensuring appropriate use of their environments. The purpose of the study is to identify the level of occupational performance and wellbeing of stroke patient and investigate the relationship between occupational performance and well-being. Occupational Self-Assessment questionnaire and Personal Well-Being Index questionnaire were used to determine the level of performance and wellbeing. Pearson correlation analysis and a prospective cross-sectional research were employed in this study in order to examine the association between occupational performance and well-being. The result section had shown the general socio-demographic characteristics of the study participants. In Occupational performance "Getting along with others" (2.71 ± 0.715) and "Relaxing and enjoying myself" (2.64 ± 0.619) was scored highest among the 21 myself items. Among the "My Environment" items, "People who support and encourage me" (2.73 ± 0.608) and "People who spend time and share interest with me" (2.70 ± 0.588) showed highest scores. Among the 8 items of the Personal Wellbeing Index-Adult, "Spirituality/ Religion" (9.53 ± 1.402) and "Personal relationships" (8.03 ± 2.468) showed highest satisfaction. In this study, there was a modest but statistically significant link between occupational performance and well-being.

Keywords: Occupational performance; Occupational self-assessment; Well-being; Occupational participation

1. Introduction

Stroke is a common neurological disease that often radically and permanently changes the lives of its survivors. It is a theatrical event that affects patients' in many different ways, not only physically, but also through a range of emotional, psychological, cognitive, and social consequences.[1] A stroke significantly influences the patient's physical, social, and psychological functioning, including loss of motor and sensory function, communication disorders, cognitive and perceptual impairment, and emotional changes.[2] These consequences can negatively impact a person's life, disrupting their engagement in desired daily performance and leading a good life. Despite these negative consequences, life doesn't stop after the stroke. Events unrelated to the problems of a stroke can affect life in different ways.[3]

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The World Health Organization estimates that each year, 15 million people suffer strokes worldwide.[4] Stroke privileges the lives of 5·8 million individuals each year and another 5 million are left permanently disabled with a range of physical, cognitive, and behavioral deficits that limit their ability to recover premorbid functioning across a number of lifestyle domains.[4]

People who have had a stroke benefit greatly from occupational therapy because it helps them strengthen their employment abilities. Stroke patients require occupational therapy in order to get a meaningful and reliable outcome measure that evaluates the breadth of occupational performance for the specific client within their environment.[2,5] Occupational therapists evaluate a person's occupational performance in three areas: self-care or activities of daily living (ADL), productivity, and leisure. Performance in these three domains is determined by how each person's physical, mental, sociocultural, and spiritual components interact.[5]

Occupational performance is considered a multidimensional, dynamic phenomenon and it encompasses the interaction between the person, their environment, and the occupation in which they engage.[6] Occupational performance necessitates balancing occupations and including views of one's self-environment, which can sometimes conflict, as well as shifting priorities.[7] Occupational therapy identifies the client's occupational strengths and problems in occupational performance.[6,7]

According to Baum (2011), occupational performance is the 'doing of meaningful activities, tasks, and roles through a complex interaction between the person and the environment'. Occupational therapists have a unique role in aiding individuals with these issues by assisting them in engaging in meaningful activities, tasks, and responsibilities that improve their engagement and well-being in daily life.[6-8]

In a recent study in Bangladesh, the prevalence rates of stroke were 2.0, 3.0, 2.0, 10.0, and 10.0 per 1000 within age groups of 40-49 years, 50-59 years, 60-69 years, 70-79 years, and 80 years of the above age group respectively. Prevalence rates peak with older age.[9] Bangladesh is a small country in South Asia with a high density of population. Another study notified that the prevalence of stroke in Bangladesh is 3 per 1000 above the age of 40 year[9].

Personal well-being is a term that refers to quality of life and life satisfaction, as well as mental and physical health. Individuals, families, work relationships, and other community-based activities such as recreation all contribute to overall quality of life.[10] Individual stroke patients have reported decreased quality of life and well-being. Occupational therapists work to ascertain which characteristics, symptoms, or functional restrictions are most critical to an individual's well-being following a stroke. Wellbeing is inextricably linked to subjective quality of life and happiness.[11]

While the term "occupational satisfaction" for occupational therapists may simply refer to a favorable experience with person's occupation, it may have a cultural connotation in occupational therapy and well-being is a commonly used and appreciated concept in contemporary culture.[12] Occupational therapy possesses characteristics that can assist many persons individuals with stroke in improving their well-being and quality of life in order to achieve more essential results.[12]

Individual well-being is a universal view of life experienced within a set period of encouragement, psychological support, adjustment, and training following a stroke.[13] Individuals with post-stroke limits can be realistic about their ability to fulfill their commitments and enjoying life.[10-11]

Qualified occupational therapists have the potential and responsibility to enhance the wellbeing for all persons who might benefit from increased engagement in meaningful occupations. It may be asserted that daily occupations increase health and well-being in terms of QOL. According to Kielhofner and Forsyth (2001), the Model of Human Occupation (MOHO) defines people' capacity to sustain an occupational engagement pattern that represents their occupational identity with regard to occupational competence.[14] Competence begins with the organization of an individual's life in order to meet important tasks and personal standards, to fulfill their roles/duties, which enables them to live a full and fascinating life.[14]

Individuals with stroke have their occupational performance, quality of life, and life satisfaction evaluated from a long-term perspective.[15] In a client-centered approach, an individual with a stroke and occupational therapists cooperate to convey the nature of the occupational performance impairment, the emphasis and necessity of intervention, and the desired outcomes of therapy.[16]

Following a stroke, the majority of persons' lives drastically change. This requires a substantial adjustment in the way we evaluate what is necessary and how we ensure complete involvement. Their discovery of the possibility of a

meaningful future life aids in mobilizing energy for their rehabilitation. This vital ability is dependent upon an individual's self-esteem and personal well-being.[15]

Outcomes in occupational therapy focus largely on increasing and enhancing the quality of clients' occupational performance, and thus, the importance of clients' subjective experiences of their occupations are often overshadowed. We contend that occupational well-being is enhanced when individuals' occupational needs, including their needs for accomplishment, affirmation, agency, coherence, companionship, pleasure, and renewal are consistently met. Occupational therapists can play a vital role in enabling clients to compose or re-orchestrate their occupational lives so they are able to meet their occupational needs more consistently.[17]

It is very much important for an occupational therapist to try to improve patients' quality of life and allow them to function optimally. As life is influenced by emotions, psychological motivations, depression, etc. After a stroke, there is a significant change to the individuals in emotional status, communication, physical function, performance, engagement, and social participation which therefore affect their health, ability to work, and well-being.

This study was helpful for our health professionals to understand the patient's perspective about their performance and provided treatment according to the setting by goal and plans. The investigator would like to gain knowledge regarding the occupational performance and well-being of the individual stroke survivor in Bangladesh after receiving occupational therapy services.

However, there are many studies about the occupational performance and well-being of stroke patients. Furthermore, there are no studies in Bangladesh that have examined the relationship between occupational performance as assessed for oneself and one's environment and well-being. Thus, the purpose of the study was to evaluate the occupational performance and well-being of stroke patients and investigate the relationship between occupational performance and well-being.

2. Material and methods

The investigator used cross-sectional descriptive study design that involves data collection to identify the relationship between occupational performance and well-being. A cross-sectional survey with quantitative responses was implemented to learn about individual stroke patient characteristics, including demographic characteristics, clinical characteristics, performance and satisfaction.

2.1. Sampling

The stroke survivors are the population of the study who are currently receiving or have received Occupational Therapy services from an outpatient unit of Occupational Therapy department at the Centre for the Rehabilitation of the Paralysed (CRP) which has been a rehabilitation center. Purposive sampling had used in this study for the appropriate 120 stroke survivors in the sampling size.

2.2. Instrumentation

Three survey questionnaires were administered to identify the performance level and wellbeing of the patients in the rehabilitation Centre setting, and the subjects' answers were analyzed. The survey consisted of three categories: Demographic questionnaire, Occupational Self-Assessment questionnaire[18], Personal Well-Being Index questionnaire[19].

2.3. Inclusion and exclusion criteria

Stroke patients are eligible for this study if they have a clinically confirmed diagnosis of stroke (ischemic or hemorrhagic) and who have received Occupational therapy. All participants must be at least 18 years old. Participants are excluded if they are suffering from aphasia. Furthermore, stroke survivors are excluded if they got less 20 points on the Mini-Mental State Examination in cognitive skill.

2.4. Procedure

The investigator requested ethical permission from the Institutional Review Committee of "Bangladesh Health Professions Institute" (BHPI) and had approved the study protocol. The investigator had used an information sheet and consent form to take the participants consent. Investigator let the participants know the details of the study by the information sheet which include the aim, objectives, way of collecting data from the participants and ethical considerations of the study. Then the investigator assessed the participant cognitive test MMSE who obtained at least

20 or it's above and they were selected as a participant for this study. After that, selected participants gave information of their demographic and clinical information. The investigator also completed the "OSA" and "PWI-A" questionnaire through a face to face interview in a silent place rather than the workplace. The data for the study of identifying the level of occupational performance and wellbeing of stroke surviving was collected through asking structured questions to the patient with stroke. The questionnaire took an average 20-25 minutes given information by each participant. The investigator was neutral during the data collection to reduce any personal bias affecting the result of the study.

2.5. Data Management and Analysis

Firstly, the investigator entered numerical data uses in the Microsoft excel in this study. These data were analyzed through performed the Statistical Package of Social Science (SPSS) version 20.0 by using a descriptive statistic method which allows giving statements about the feature of the participant. All data were input within the variable of SPSS. Demographic questionnaire, condition related questionnaire, OSA-Myself, OSA-My environment and PWI-A were analyzed and Descriptive statistics were used to calculate the means, standard deviation, percentage of demographic and clinical characteristics through performing by the SPSS. The represented data were organized by tables in Microsoft Office word. The investigator was also calculated with descriptive analysis to find out the mean values & standard deviation (SD) of Occupational self-assessment and Personal well-being index. By Pearson correlation, the investigator determines the relationship between OSA-Myself, OSA-My environment with the PWI-A.

3. Results

3.1. Demographic Information

The analysis is based on the sample of 120 subjects who had experienced stroke. The subjects consisted of 80 males (66.7%) and 40 females (33.3%), all of whom had experienced stroke. The demographic characteristics of the study population are shown in Table 1. Most of the people 55.8% (n=67) experienced stroke between 50-69 years old. 88.3% (n=106) subjects were married, whereas 9.2% (n=11) were widowed and 2.5% (n=3) were single.In a study in ,Bangladesh also reveal thatPeople with age range 70- 79 years compared to 40 - 49 year age range is 4.988 times and people with age range >80 years compared to 40 to 49 year age range is 4.798 times more likely to have suffered from stroke. The prevalence rate was higher among men compared with women 3.44 and 2.41 per 1000 respectively[8]. most less and above However Educational status of the patient in this study, illiterate patient 12.5% (n=15) were most affected stroke ,masters level of educational status patient 9.2% (n=11) affected stroke quite similar to illiterate patient were completed graduation 22.5% (n=27) primary, S.S.C, were quite to same as graduation statusFurthermore, 20.8% (n=25) were businessman, 36.7% (n=44) were service holder, 27.5% (n=33) were housewife, 10% (n=12) were teacher, 1.7% (n=2) subjects were students, 2.5% (n=3) subjects were farmer and 1 subject were garment worker prior to the onset of stroke.

Table 1 Demographic Characteristics of the study participants

Background Factors (N= 120)	Number of Participants (n)	Percentage of Participants (%)
Age		
18-29	5	4.2
30-49	37	30.8
50-69	67	55.8
70-89	11	9.2
Sex		
Male	80	66.7
Female	40	33.3
Marital Status		
Married	106	88.3
Unmarried	3	2.5
Widow	11	9.2

Religion Status		
Islam	103	85.8
Hinduism	13	10.8
Christianity	4	3.3
Educational Status		
Illiterate	15	12.5
Primary	24	20
SSC	17	14.2
HSC	26	21.7
Graduate	27	22.5
Masters & Above	11	9.2
Occupation		
Businessman	25	20.8
Service Holder	44	36.7
Student	2	1.7
Farmer	3	2.5
Garment Worker	1	0.8
Housewife	33	27.5
Teacher	12	10.0
Family's Monthly Income		
5000- 10000	27	22.5
11000- 20000	34	28.3
21000- 30000	17	14.2
31000- 40000	11	9.2
41000- 50000	15	12.5
Above 50000	16	13.3
Residential area		
Rural	57	47.5
Urban	63	52.5
Family Type		
Nuclear Family	88	73.3
Extended Family	32	26.7

3.2. Clinical Information

In Table 2 Clinical characteristics shows that, most people experienced ischemic rather than hemorrhagic whereas 74.2% (n=89) subjects had ischemic stroke and 25.8% (n=31) were hemorrhagic. A study reported a relatively higher incidence of hemorrhagic stroke in children below 10 years and 10-19 years, irrespective of the sexes. Thus, we have confirmed from the observation of previous studies that ischemia is much more common than hemorrhagic events in adulthood stroke9. Of the 120 potential stroke patients, 15.8% (n=19) subjects have had previous experienced by stroke and 84.2% (n=101) subjects had experienced their first-ever stroke. The most common affected side of the stroke is left 59.2% (n=71) subjects and right-side stroke had 40.8% (n=49) subjects. Subjects in this study are suffering from the stroke and survive to have experience with it about 40.8% (n=49) subjects for (0-3) months, 20% (n=24) subjects for (3-6) months, 21.7% (n=26) subjects for (6-12) months, 4.2% (n=5) subjects for (13-18) months 13.3% (n=16) subjects for 24 months more. 42.5% (n=51) subjects started to receive Occupational therapy service between 0-1 months after stroke, 34.2% (n=41) subjects received between 2-3 months, 10% (n=12) subjects between 4-6 months, 13.3% (n=16) subjects above 6 months. Or, 71.7% (n=86) subjects started to receive Rehabilitation services between 1-6 months, 15%

(n=18) subjects received between 7-12 months, 5% (n=6) subjects between 13-24 months, 8.3% (n=10) subjects above 6 months. Usually, stroke patients are started their rehabilitation treatment within 1-6 months. Early treatment is necessary for patients with stroke. Some studies report that stroke recovery occurs faster in the early months18.

The most common risk factor among stroke patient is Hypertension and it's also leading causes of the Stroke. Diabetes is also as a common risk factor for the stroke. Most of the participants have minimum single symptom and moreover, in the combination of multiple symptom. These risk factors are smoking, tobacco chewing, and heart disease. In a recent study in Bangladesh also identified that oral contraceptive pills, pregnancy, connective tissue disease with facilities, hematological variables, drug abuse, congenital heart disease, family history of stroke, and some genetic diseases also discrete risk factor8. In the study, the researcher collected these data from the secondary source assessment document of the 72.5% (n=87) out of 120 were not found any association synergistic movement, but the rest of the number founded only the flexor synergy and in the terms of various muscle tone were very similar or close number in Normal 26.7% (n=32), Flaccid 25.8% (n=31), Spastic 25% (n=30) and mixed 22.5% (n=27).

The investigator, founded normal hand function were 4 in the study among 120 subjects, whereas 43.3% (n=52) were impossible able to perform in hand function, 25% (n=30) were able to perform with much assistance and similar 14.2% (n=17) subjects were with little assistance and difficulties to perform hand function and in the term of sensation 19.2% (n=23) subjects had impaired and 80.8% (n=97) subjects had normal sensation.

Table 2 Clinical characteristics of the study participants

Condition Related Factors (N= 120)	**Number of Participants (n)**	**Percentage of Participants (%)**
Type of stroke		
Haemorrhagic	31	25.8
Ischemic	89	74.2
Affected side of the body		
Right	49	40.8
Left	71	59.2
Past Medical History		
Smoking	4	3.3
Tobacco chewing	3	2.5
Hypertension	23	19.2
Heart disease	2	1.7
Diabetics	8	6.7
Tobacco chewing, Hypertension, Diabetics	7	5.8
Smoking, Hypertension, Diabetics	10	8.3
Smoking, Hypertension	12	10.0
Hypertension, Diabetics	21	17.5
Tobacco, Hypertension, Heart disease	2	1.7
Heart disease, Diabetics	1	0.8
Smoking, Diabetics	2	1.7
Tobacco chewing, Hypertension	6	5.0
Hypertension, Heart disease, Diabetics	12	10.0
Others	7	5.8

Length of stroke		
0- 3 months	49	40.8
3-6 months	24	20.0
6-12 months	26	21.7
13- 18 months	5	4.2
Above 24 months	16	13.3
Previous History of Stroke		
Yes	19	15.8
No	101	84.2
Duration of receiving OT		
0-1 month	51	42.5
2- 3 months	41	34.2
4- 6 months	12	10.0
Above 6 months	16	13.3
Duration of taking rehabilitation		
1-6 months	86	71.7
7- 12 months	18	15.0
13- 24 months	6	5.0
Above 24 months	10	8.3
Synergy		
Not present	87	72.5
Flexor Synergy	33	27.5
Muscle tone		
Normal	32	26.7
Flaccid	31	25.8
Spastic	30	25.0
Mixed	27	22.5
Hand Function		
Impossible	52	43.3
With much assistance	30	25.0
With little assistance	17	14.2
With minimum difficulties	17	14.2
Normal	4	3.3
Sensation		
Impaired	23	19.2
Normal	97	80.8

3.3. Occupational Self- Assessment (OSA)

3.3.1. Occupational Self- Assessment-

"Myself"On Table 3, "Getting along with others" (2.71 ± 0.715) was scored highest among the 21 myself items for occupational performance and "Relaxing and enjoying myself" (2.64 ± 0.619) was scored second highest. "Physically doing what I need to do" (1.58 ± 0.602)" was lowest scored among the "Myself" items for occupational performance and "Managing my basic needs" (1.60 ± 0.703) was second lowest scored.

In the 21 items scale of myself for the important ratings, "Taking care of myself" (3.48 ± 0.686) showed highest scored and the second highest scored "Taking care of others whom I am responsible" (3.26 ± 0.912). The least important item was "Working towards my goal" (2.47 ± 0.987) and the second least score was "Relaxing and enjoying myself" (2.50 ± 0.850).

Stroke people needed help from family and other people and were relatively well supported. This support, however, could deteriorate depending on their ability to perform activities of daily living after stroke and is an important factor that may prevent the resumption of work and return to pre-stroke life[8].

Table 3 Occupational Self- Assessment— "Myself"

Characteristics	**Performance M ± SD**	**Importance M ± SD**
Concentrating on my tasks	2.46 ± 0.77	2.94 ± 0.96
Physically doing what I need to do	1.58 ± 0.602	3.11 ± 0.731
Taking care of the places where I live	1.77 ± 0.827	2.73 ± 0.914
Taking care of myself	1.96 ± 0.771	3.48 ± 0.686
Taking care of others whom I am responsible	1.77 ± 0.742	3.26 ± 0.912
Getting where I need to go	1.77 ± 0.719	3.09 ± 0.778
Managing my finances	2.43 ± 0.775	2.67 ± 1.064
Managing my basic needs	1.60 ± 0.703	2.57 ± 1.214
Expressing myself to others	2.58 ± 0.773	2.80 ± 0.975
Getting along with others	2.71 ± 0.715	2.91 ± 0.961
Identifying and solving problems	2.26 ± 0.692	2.73 ± 0.840
Relaxing and enjoying myself	2.64 ± 0.619	2.50 ± 0.850
Getting done what I need to do	1.87 ± 0.634	3.05 ± 0.776
Having a satisfying routine	1.97 ± 0.721	2.73 ± 0.907
Handling my responsibilities	1.81 ± 0.598	3.12 ± 0.881
Being involved as a student, worker, volunteer, and family member	1.88 ± 0.629	3.04 ± 0.883
Doing activities, I like	2.01 ± 0.692	2.69 ± 0.887
Working towards my goal	1.61 ± 0.639	2.47 ± 0.987
Making decisions based on what I think is important	2.26 ± 0.815	3.00 ± 0.979
Accomplishing what I set out to do	2.16 ± 0.622	2.89 ± 2.786
Effectively using my ability	1.89 ± 0.858	3.23 ± 0.855

3.3.2. Occupational Self- Assessment- "My Environment"

Among the "My Environment" items for occupational performance, on Table 4 shows that "People who support and encourage me" (2.73 ± 0.608) and "People who spend time and share interest with me" (2.70 ± 0.588) showed the highest scores sequentially. The basic things I need to live and take care of myself" (1.61 ± 0.598) and "The things I need to be productive" (1.56 ± 0.619) "were showed gradually lowest scored in the "My Environment" items.

In term of importance ratings of my environment section, "A place to live and take care of myself" (3.32 ± 0.778) was scored highest and "People who support and encourage me" (3.29 ± 0.920) was scored second highest. "Opportunities to do things I value and like" (2.08 ± 0.762) was scored the lowest and "The things I need to be productive" (2.34 ± 0.912) was scored second lowest.

Table 4 Occupational Self- Assessment— "My Environment"

Characteristics	Performance M ± SD	Importance M ± SD
A place to live and take care of myself	1.88 ± 0.747	3.32 ± 0.778
A place where I can be productive	1.62 ± 0.663	2.64 ± 0.977
The basic things I need to live and take care of myself	1.61 ± 0.598	2.84 ± 0.907
The things I need to be productive	1.56 ± 0.619	2.34 ± 0.912
People who support and encourage me	2.73 ± 0.608	3.29 ± 0.920
People who spend time and share interest with me	2.70 ± 0.588	3.25 ± 0.872
Opportunities to do things I value and like	1.93 ± 0.645	2.08 ± 0.762
Places where I can go and enjoy myself	1.70 ± 0.717	3.04 ± 1.032

3.4. Personal Well-being Index- Adult

On Table 5 among the 8 items of the Personal Wellbeing Index-Adult, "Spirituality/ Religion" (9.53 ± 1.402) showed highest satisfaction and "Personal relationships" (8.03 ± 2.468) showed second highest satisfaction. "Personal Health" (4.73 ± 3.444) showed the lowest satisfaction and "Standard of living" (5.64 ± 3.509) showed the second lowest satisfaction among the stroke patients.

Table 5 Personal Well-being Index— Adult

Characteristics	M ± SD
Standard of living	5.64 ± 3.509
Personal health	4.73 ± 3.444
Achieving in life	7.23 ± 2.992
Personal relationships	8.03 ± 2.468
Personal safety	7.53 ± 3.051
Community connectedness	7.28 ± 3.117
Future security	7.18 ± 3.083
Spirituality/ Religion	9.53 ± 1.402

3.5. Relationship between Occupational Performance and Well-being

The Table 6 indicates that the Pearson correlation coefficient value of Occupational Performance-Myself = 0.332 confirms that there is a weak positive relationship between the Occupational Performance and Well-being variables. Occupational Performance- My Environment = 0.316 also shows a weak positive relationship between the Occupational Performance and Well-being.

Table 6 Relationship between Occupational Performance and Well-being

	Occupational Performance (Myself)	**Occupational Performance (My Environment)**
Well-being	0.332 *	0.316*

p<0.01

SPSS reports the p-value for this test as being .000 which indicate that there is a significant correlation between the Occupational Performance and Well-being. (p<0.01)

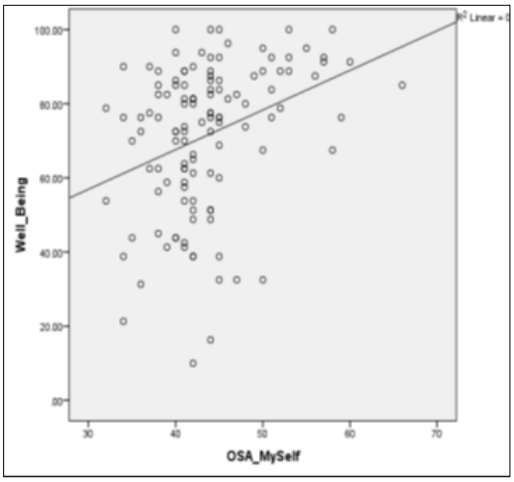

Figure 1 Relation between Well-being & OSA-Myself

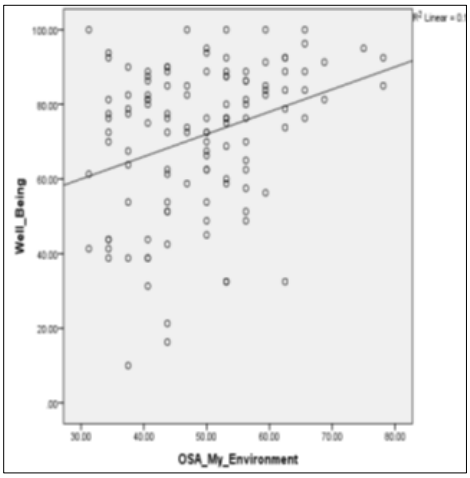

Figure 2 Relation between Well-being &OSA-My environment

Figure: (1 and 2) shows the scattered plot of the data indicating a linear association between the variables (Independent variables = Myself, My environment and Dependent variable=wellbeing).

Well-being is considered to be the dependent variables, so are plotted on the vertical axis. Myself and my environment are also considered to be independent variables, so are plotted on the horizontal axis.

Overall, analysis of the relationship between occupational performance as assessed by the "Myself" and "My Environment" sections of the OSA and well-being exposed significant linear positive correlation. (p<0.01)

4. Discussion

The purpose of this study was to describe the level of occupational performance and wellbeing survivors of stroke and also find out the relationship between occupational performance and wellbeing. It is clear from the result that there is a significant linear positive relationship between Occupational performance and Well-being.

In this study, demographic data shows around 50-69 years adult group of peoples was most suffered from stroke. In the ratio of male and female in this study, Male are more affected rather than female. In a study in Bangladesh also reveal that, People with age range 70-79 years compared to 40-49-year age range is 4.988 times and people with age range >80 years compared to 40 to 49-year age range is 4.798 times more likely to have suffered from stroke. The prevalence rate was higher among men compared with women 3.44 and 2.41 per 1000 respectively.[15]

In this study people experienced likely to be more ischemic rather than hemorrhagic stroke (Ischemic=74.2%% and Hemorrhagic=25.8%) and first-ever history of stroke experienced 84.2%, whereas most of the participant affected or damaged to the right brain hemisphere is followed by the physical appearance in left hemiplegic. A study reported a relatively higher incidence of hemorrhagic stroke in children below 10 years and 10-19 years, irrespective of the sexes. Thus, we have confirmed from the observation of previous studies that ischemia is much more common than hemorrhagic events in adulthood stroke.[16]

The most common risk factor among stroke patient is Hypertension and it's also leading causes of the Stroke. Diabetes is also as a common risk factor for the stroke. Most of the participants have minimum single symptom and moreover, in the combination of multiple symptom. These risk factors are smoking, tobacco chewing, and heart disease. In a recent study in Bangladesh also identified that oral contraceptive pills, pregnancy, connective tissue disease with facilities, hematological variables, drug abuse, congenital heart disease, family history of stroke, and some genetic diseases also discrete risk factor.[15] Usually, stroke patients are started their rehabilitation treatment within 1-6 months. Early treatment is necessary for patients with stroke. Some studies report that stroke recovery occurs faster in the early months.[20]

Stroke patients are most well performed "Getting along with others" in occupational performance. That means after experiencing stroke, they haven't any problem to cope with and develop a relationship with others. They are able to engage, relate, respect and collaborate with others. Stroke patients also performed well "Relaxing and enjoying myself" item on occupational performance. Which means stroke patients didn't face any problem to enjoy their interest, relaxation, time to unwind with others and alone.

But the poor performed by them are the item "Physically doing what I need to do" of occupational performance. That means, they have a poor motor skill for moving of self and objects to execute daily life tasks. Another lowest performance among 21 items of OSA scale is "Managing my basic needs". This implies that the stroke patients found it difficult to manage their food and medicine. They have difficulty with seating a proper diet, taking necessary medicine, otherwise attending to health and well-being. In case of importance on myself items the stroke, patients identified "taking care of myself" as the most important factor. They get more priority in doing one's personal care and health maintenance, such as personal hygiene, dressing and grooming. The patient also found "Taking care of others for whom I am responsible" as the most important factor. They also want to take care of their family, such as children or elderly relatives.

The most least important factors are "Working towards my goal" and "Relaxing and enjoying myself" which was identified by the patients. They didn't like to give attention in sustaining an effort towards something that they want and plans to accomplish and having relax and enjoying own interest is not very important for them. It may happen due to most of them focusing on recovery from residual disability from stroke. Among the "My Environment" items for occupational performances, "People who support and encourage me" and "People who spend time and shared interest to me" were scored higher, which suggested that the stroke patients need support from individual or group who guide, comfort, urge, reassure, inspire for occupational participation and also spend time and shared interests with them. This support can be provided by family, friends, co-workers, religious group and health care professionals.[21]

5. Conclusion

Stroke is considered a personal disaster, which hits the patient suddenly and leaves him or her with distressing and disabling sequelae. In this study, occupational performance and well-being were measured in the patients with stroke through client-centered, Self-assessment and self-report questionnaires. This study demonstrates a significant positive linear correlation between occupational performance and well-being was indicated based on analysis of the questionnaires. There are many studies showing satisfaction, well-being and quality of life of patients with stroke. But there were no studies about relationships of occupational performance and wellbeing of stroke survival in Bangladesh. This study is not only representing the relationship status of Occupational performance and wellbeing for stroke survival, but also it will helpful for the guideline (in the Bangla version questionnaire form of OSA and PWI-A) for any other health professional or same health professionals who will conduct in the future.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no potential conflicts of interest.

Statement of ethical approval

An Ethical approval was taken from the Institutional Review board (CRP-BHPI/IRB/01/17/23) and the Data collection approval was taken from the Principal of BHPI.

Statement of informed consent

Written Informed consent was obtained from all individual participants included in the study.

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