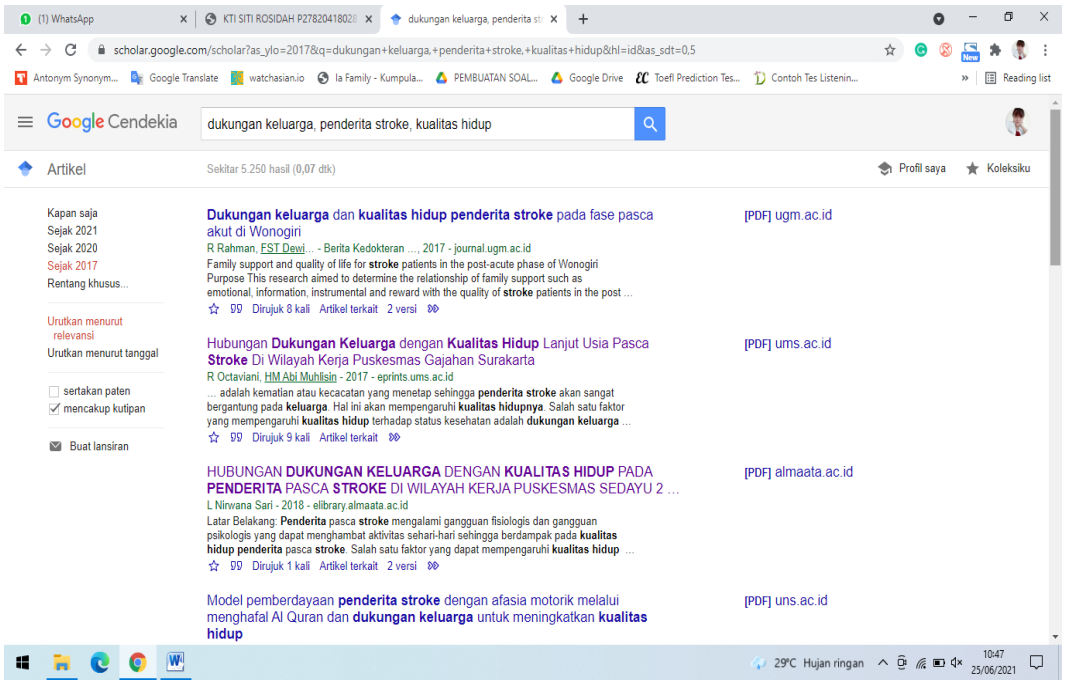
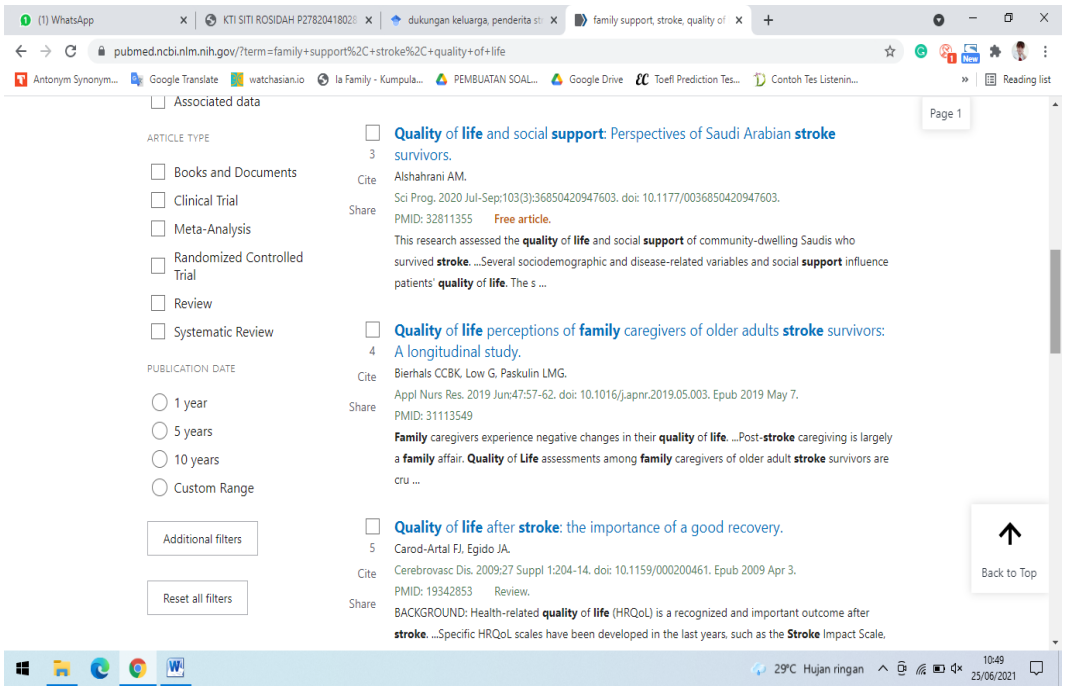
LAMPIRAN

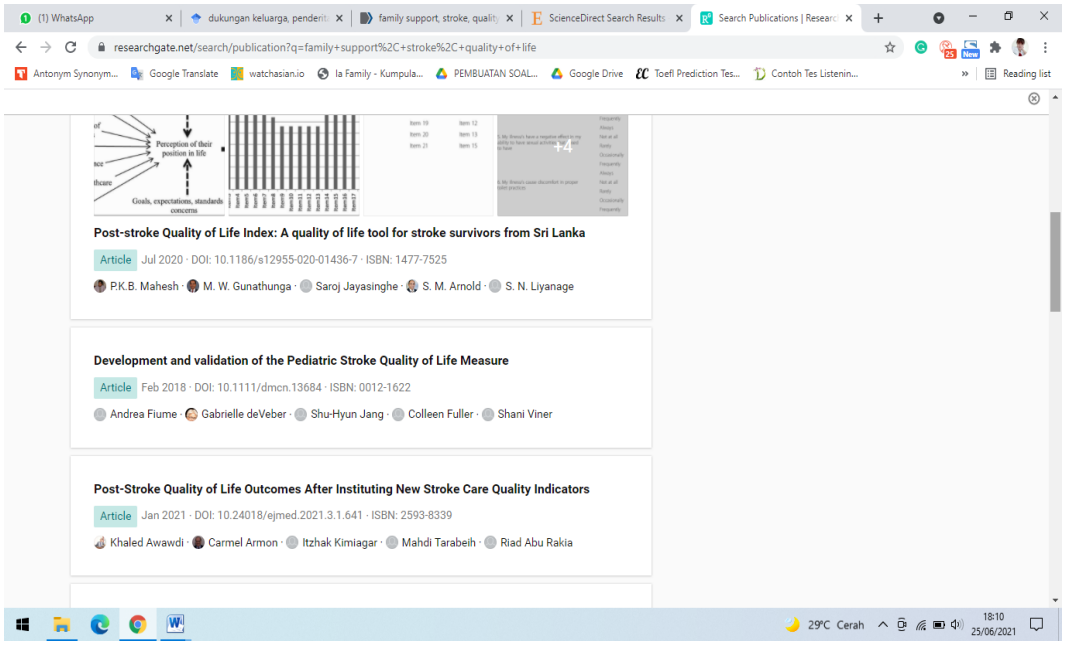
Lampiran 1. Pencarian Literatur dengan Google Scholar



Lampiran 2. Pencarian Literatur dengan Pubmed



Lampiran 3. Pencarian Literatur dengan *Research Gate*



Lampiran 4. Lembar Bimbingan/Konsultasi Online

LEMBAR KONSULTASI

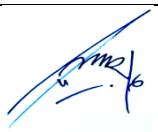
Nama : Siti Rosidah

Nim : P27820418028

Judul KTI : Hubungan Dukungan Keluarga Dengan Kualitas Hidup Penderita Stroke

No.	Hari/ Tanggal	Materi Bimbingan	Revisi	TTD Mahasiswa	TTD Pembimbing
1.	Sabtu, 06 Februari 2021	1. Arahan penyusunan proposal KTI 2. Kontrak prosedur bimbingan	-		

2.	Sabtu, 13 Februari 2021	BAB 1	1. Judul ditambahkan kata studi literature review 2. Mengganti tujuan umum dan khusus		
3.	Jum'at, 26 Februari, 2021	BAB 2	1. Menambahkan dukungan keluarga 2. Penulisan dirapikan (lihat panduan)		
4.	Kamis, 11 Maret 2021	BAB 3	1. Kata kunci 2. Diagram flow dibuat seadanya 3. Tabel dirubah sesuai nomor poin 4. Metode jurnal dilengkapi		
5.	Senin, 22 Maret 2021	Evaluasi keseluruhan proposal	Menambahkan laman jurnal pada daftar pustaka		
6.	Senin, 29 Maret 2021	Arahan persiapan seminar proposal	-		
7.	Jum'at, 30 Maret 2021	Arahan mencari jurnal internasional dan nasional	-		

8.	Senin, 03 Mei 2021	BAB 4	1. Menyesuaikan jurnal dengan judul KTI 2. Membuat tabel karakteristik studi		
9.	Rabu, 05 Mei 2021	BAB 4	Membuat tabel tentang rangkuman 5 jurnal		
10.	Senin, 17 Mei 2021	BAB 5	Pembahasan disesuaikan dengan tujuan khusus		
11.	Kamis, 20 Mei 2021	BAB 5	Ditambahkan opini sendiri atau pendapat penulis mengenai teori dan hasil yang ada.		
12.	Senin, 24 mei 2021	BAB 6 dan Abstrak	1. Saran disesuaikan dengan manfaat 2. Metode pada abstrak ditambahkan rincian jurnal 3. Batasan kata pada asbtrak maksimal 250 kata		

Lampiran 5. Lembar Revisi

LEMBAR REVISI KTI

Politeknik Kesehatan Surabaya
Program Studi D3 Keperawatan Sidoarjo
Jl. Pahlawan No.173 A
Sidoarjo

Form.11.01.54

Catatan Perbaikan Seminar Hasil KTI
Prodi D3 Keperawatan Sidoarjo
Tahun Akademik : 2020/2021

NAMA MAHASISWA : SITI ROSIDAH
NIM : P27820418028
JUDUL KTI : Hubungan Dukungan Keluarga Dengan Kualitas Hidup Penderita Stroke

REVISI	TANDA TANGAN PENGUJI
Loetfia Dwi Rahariyani, S.Kp., M.Si Saran: 1. Mengganti NIP yang benar 2. Menambahkan lembar pernyataan 3. Kata literatur review pada tujuan di taruh di akhir kalimat 4. Tujuan khusus harus lebih jelas dan fokus 5. Kriteria inklusi dan eksklusi pada poin problem di ganti 6. Mengganti jurnal yang sesuai dengan judul	
Kusmini Suprihatin, M.Kep. Sp.Kep.An Saran : 1. Mengganti jurnal yang sesuai dengan judul 2. Mengganti tujuan khusus 3. Perbaiki cover	

Mengetahui,
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LEMBAR REVISI KTI

Politeknik Kesehatan Surabaya
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Catatan Perbaikan Seminar Hasil KTI
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NAMA MAHASISWA : SITI ROSIDAH
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JUDUL KTI : Hubungan Dukungan Keluarga Dengan Kualitas Hidup Penderita Stroke

REVISI	TANDA TANGAN PENGUJI
Loetfia Dwi Rahariyani, S.Kp., M.Si Saran: 1. Abstrak spasi 1, font 11 2. Semua tabel potrait 3. Daftar isi cek mana yang perlu di bold dan tidak 4. Tanggal persetujuan di isi 5. Mengganti jurnal yang belum sesuai dengan judul	
Kusmini Suprihatin, M.Kep. Sp.Kep.An Saran : 1. Mengganti jurnal yang belum sesuai dengan judul 2. Kesimpulan menjawab tujuan khusus dan dibuat poin bukan alinea 3. Tambahkan kesimpulan pada pembahasan 4. Asbtrak berisi IMRAD	

Mengetahui,
Pembimbing Utama KTI

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Berita Kedokteran Masyarakat
(BKM Journal of Community Medicine and Public Health)

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Dukungan keluarga dan kualitas hidup penderita stroke pada fase pasca akut di Wonogiri

Family support and quality of life for stroke patients in the post-acute phase of Wonogiri

Rahman[1], Fatwa Sari Tetra Dewi[2], Ismail Setyopranoto[3]

Dikirim: 28 Februari 2017
Diterbitkan: 1 Agustus 2017

Abstract

Purpose: This research aimed to determine the relationship of family support such as emotional, information, instrumental and reward with the quality of stroke patients in the post-acute phase in Wonogiri. Methods: A cross-sectional study was conducted involving interviews and the use of medical record data of 161 post-acute stroke patients in Wonogiri. Results: This study showed that there was a significant correlation of information support (p= 0.000), and awareness support (p=0.000) with the quality of life of post-acute stroke patients. Conclusion: The study confirms the importance of family support in terms of information support and awards support to the quality of life of patients with post-acute stroke.

Keywords: family support; quality of life; post acute stroke

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PENDAHULUAN

Stroke merupakan penyebab kematian ketiga di dunia setelah penyakit jantung dan kanker. Setiap tahun, diperkirakan kematian akibat stroke sekitar 5.540.000 kematian di seluruh dunia, dan dua pertiga dari kematian terjadi di negara kurang berkembang (1). Penelitian epidemiologi stroke di Asia Timur, selama tahun 1984-2004, menemukan angka kejadian kasus 4.995 di China, Taiwan dan Jepang. Sementara tahun 2005 dilaporkan prevalensi stroke sebesar 4,05% di Singapura, sedangkan di Thailand prevalensi Stroke sebesar 690 per 100.000 penduduk (2).

Sebuah penelitian di beberapa rumah sakit Jakarta dan kota di Indonesia menemukan bahwa kurang lebih 50% dari seluruh pasien yang dirawat di bangsal saraf adalah pasien stroke dan kurang lebih 5% dari pasien yang dirawat tersebut meninggal karena stroke (3). Survei Riskesdas 2013 melaporkan prevalensi stroke di Indonesia sebesar 12,1 per 1000 penduduk. Sementara prevalensi stroke di Jawa Tengah sebesar 12,3 per 1000 penduduk. Prevalensi stroke pada laki-laki sebesar 12,4 per 1000 penduduk dan perempuan sebesar 12,1 per 1000 penduduk (4).

Selain penyebab kematian, stroke menimbulkan kecacatan jangka panjang. Kecacatan akibat stroke bukan hanya cacat fisik semata, namun juga cacat mental, terutama pada usia produktif (3). Setengah dari pasien yang masih hidup selama tiga bulan setelah stroke akan bertahan hidup lima tahun kemudian, dan sepertiga akan bertahan selama 10 tahun. Sekitar 60% pasien diharapkan untuk memulihkan kemerdekaan dengan perawatan diri, dan 75% diharapkan berjalan mandiri. Pasien yang sembuh namun mengalami kecacatan memerlukan bantuan baik oleh keluarga, teman maupun petugas kesehatan. Hal ini diperlukan karena selain dampak kecacatan fisik seperti mobilitas atau keterbatasan aktivitas sehari-hari, dampak lain yang ditimbulkan bagi pasien adalah ketidakmampuan psikososial seperti kesulitan dalam sosialisasi. Dukungan keluarga diharapkan membantu pasien dalam fase rehabilitasi secara optimal sehingga dapat meningkatkan kualitas hidup pasien pasca stroke (1).

Kualitas hidup berkaitan dengan penilaian subjektif tentang status kesehatan seseorang dalam menilai kualitas hidupnya. Kualitas hidup merupakan istilah untuk menyampaikan rasa kesejahteraan, termasuk aspek kebahagiaan dan kepuasan hidup secara keseluruhan (5). Dukungan keluarga yang diberikan kepada pasien selama masa rehabilitasi penting dalam meningkatkan kualitas hidup (6). Kurang kasih sayang, perhatian dan dorongan keluarga dapat menimbulkan penurunan kemampuan dalam beraktivitas (7). Penelitian lain menunjukkan bahwa dukungan sosial yang tinggi akan meningkatkan kesehatan dan mengurangi risiko terkena penyakit (8).

METODE

Jenis penelitian ini adalah kuantitatif dengan rancangan *cross sectional*. Penelitian dilaksanakan di RSUD Dr. Soediran Mangun Sumarso pada tanggal 4 Agustus-8 Oktober 2016. Populasi penelitian adalah semua penderita stroke yang sudah di diagnosa oleh dokter dan dirawat >48 jam di RSUD Dr. Soediran MS Wonogiri. Besar sampel dalam penelitian dihitung menggunakan rumus *correlation coefficient* (9).

Sesuai hasil perhitungan diperoleh total sampel adalah 161 responden. Kriteria inklusi adalah pasien stroke iskemik dengan skor BI <65, berusia antara 18-60 tahun, dalam keadaan sadar dan mampu berkomunikasi, aktif melakukan rawat jalan, dan bersedia menjadi responden dalam penelitian.

Data dukungan keluarga diperoleh dari wawancara responden menggunakan kuesioner dukungan keluarga yang terdiri dari 36 pertanyaan dengan skala likert (11). Pengukuran kualitas hidup pasien stroke pasca akut menggunakan kuesioner WHO-QOL yang terdiri dari 26 item pertanyaan (12). Data *outcome* fungsional diperoleh dari rekam medis rumah sakit menggunakan Barthel Indeks (13). Sementara data *outcome* klinis diperoleh meng- gunakan *National Institutes of Health Stroke Scale* (NIHSS) (14).

Jenis penelitian ini adalah kuantitatif dengan rancangan *cross sectional study*. Penelitian ini dilaksanakan di RSUD Dr. Soediran Mangun Sumarso pada tanggal 4 Agustus-8 Oktober 2016. Populasi dalam penelitian ini adalah semua penderita stroke yang sudah di diagnosa oleh dokter dan dirawat >48 jam di rumah sakit Dr. Soediran MS Wonogiri. Besar sampel dalam penelitian dihitung menggunakan rumus *correlation coefficient* (9).

Nilai median dukungan keluarga berupa dukungan emosional, dukungan informasi, dukungan instru- mental dan dukungan penghargaan adalah 3. Nilai median kualitas hidup pasien stroke pasca akut adalah 65. Median digunakan sebagai *cut off point* penilaian dukungan keluarga dan derajat kualitas hidup.

Data diolah dan dianalisis dengan menggunakan *software Stata* 12.1. Analisis bivariat menggunakan uji *Spearman rank* dan analisis multivariat menggunakan uji regresi linier ganda dengan kemaknaan statistik $p<0,05$ dan confidence interval (CI) sebesar 95%.

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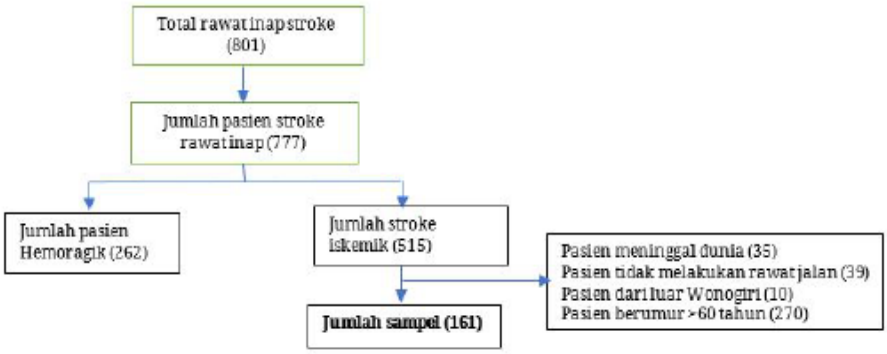

Gambar 1. Cara pengambilan sampel dalam penelitian

HASIL

Mayoritas responden pada penelitian ini berumur 56-60 tahun, laki-laki, berstatus menikah, pendidikan rendah, bekerja, berstatus ekonomi rendah, bertempat tinggal di wilayah pedesaan, pasien stroke dengan skor barthel indeks antara 50-55 dan pasien stroke dengan skor NIHSS antara 4-14 sebesar. Karakteristik subjek penelitian disajikan dalam Tabel 1.

Tabel 1. Karakteristik pasien stroke pasca akut

Variabel	% (n=161)
Umur	
39-55 tahun (n=40)	24,84
56-60 tahun (n=121)	75,16
Jenis Kelamin	
Laki-laki (n=90)	55,9
Perempuan (n=71)	44,1
Status Perkawinan	
Menikah (n=152)	94,41
Tidak menikah (n=9(	5,59
Tingkat Pendidikan	
Tinggi (n=37)	22,98
Rendah (n=124)	77,02
Pekerjaan	
Bekerja (n=112)	69,57
Tidak bekerja (n=49)	30,43
Status Ekonomi	
Tinggi (n=62)	38,51
Rendah (n=99)	61,49
Tempat Tinggal	
Urban (n=39)	24,22
Rural (n=122)	75,78
Barthel Indek	
Skor 50-55 (n=87)	54,04
Skor 30-49 (n=74)	45,96
NIHSS	
Skor 4-14 (n=92)	57,14
Skor 15-25 (n=69)	42,86

Tabel 2 menunjukkan lebih dari setengah responden mendapatkan dukungan emosional tinggi, dan mendapat dukungan informasi. Sementara, mayoritas responden memiliki dukungan intrumental dan penghargaan kategori tinggi.

Tabel 2. Distribusi Dukungan Keluarga Penderita Stroke pada Fase Pasca Akut di Kabupaten Wonogiri

Variabel	Persentase (%)
Dukungan emosional	
Tinggi (n=90)	55,90
Rendah (n=71)	44,10
Dukungan Informasi	
Tinggi (n=89)	55,28
Rendah (n=72)	44,72
Dukungan instrumental	
Tinggi (n-81)	50,31
Rendah (n=80)	49,69
Dukungan penghargaan	
Tinggi (n=86)	53,42
Rendah (n=75)	46,58

Tabel 3 menunjukkan responden dengan kualitas hidup tinggi sebanyak 81 (50,31%). Sedangkan kualitas hidup berdasarkan domain diperoleh: domain fisik tinggi 82 (50,93%), dimain psikologis tinggi 81 (50,31%), domain sosial tinggi 83 (51,55%), domain lingkungan tinggi 84 (52,17%), persepsi kualitas hidup tinggi 75 (46,42%) dan persepsi kesehatan tinggi 75 (46,42%). Pengaktegorian dilakukan dengan *cut off point* median pada masing-masing variabel. Nilai *cut off median* masing-masing variabel disajikan pada bagian Metode.

Tabel 3. Distribusi skor kualitas hidup penderita stroke pada fase pasca akut di Kabupaten Wonogiri

Variabel	Persentase (%)
Kualitas hidup	
Tinggi (n=81)	50,31
Rendah (n=80)	49,69
Domain fisik	
Tinggi (n=82)	50,93
Rendah (n=79)	49,07
Domain psikologis	
Tinggi (n-81)	50,31
Rendah (n=80)	49,69
Dukungan Sosial	
Tinggi (n=83)	51,55
Rendah (n=78)	48,45
Domain Lingkungan	
Tinggi (n=84)	52,17
Rendah (n=77)	47,83
Persepsi Kualitas hidup	
Tinggi (n=75)	46,42
Rendah (n=86)	53,42
Persepsi kesehatan	
Tinggi (n=75)	46,42
Rendah (n=86)	53,42

Tabel 4 menunjukkan variabel yang berhubungan dengan kualitas hidup pasien stroke pada fase pasca akut yaitu dukungan emosional, dukungan informasi, dukungan instrumental dan dukungan penghargaan.

Tabel 4. Korelasi dukungan keluarga pada kualitas hidup pasien stroke fase pasca akut

Variabel	*r*	*p-value**
Dukungan emosional	0,801	0,0000
Dukungan informasi	0,795	0,0000
Dukungan instrumental	0,723	0,0000
Dukungan penghargaan	0,766	0,0000

Keterangan: *analisis spearman rank (signifikan p<0,05)

Hasil analisis bivariat diketahui bahwa variabel luar yang berhubungan dengan kualitas hidup pasien stroke pada fase pasca akut adalah umur, jenis kelamin, pendidikan, pekerjaan, status ekonomi, barthel indeks, dan NIHSS. Hasil analisis bivariat dapat disajikan pada Tabel 5.

Tabel 5. Korelasi variabel luar dengan kualitas hidup pasien stroke pada fase pasca akut

Variabel	*r*	*p-value*
Umur	-0,309	0,0001
Jenis Kelamin	0,289	0,0002
Status perkawinan	-0,140	0,0763
Pendidikan	-0,501	0,0000
Pekerjaan	-0,372	0,0000
Status Ekonomi	-0,701	0,0000
Tempat tinggal	-0,131	0,0964
Barthel Indeks	0,747	0,0000
NIHSS	-0,734	0,0000

Terdapat 5 variabel yang secara statistik berhubungan dengan kualitas hidup penderita stroke pada fase pasca akut yaitu dukungan informasi, dukungan penghargaan, tingkat pendidikan, barthel indeks dan NIHSS (Tabel 6)

Tabel 6. Analisis multivariat faktor-faktor yang berhubungan dengan kualitas hidup pasien stroke fase pasca akut

Variabel	Koefisien *b*	*p-value*
Dukungan informasi	0,401	0,000*
Dukungan penghargaan	0,138	0,035*
Pendidikan	-0,088	0,022*
Barthel Indeks	0,278	0,000*
NIHSS	-0,132	0,025*

BAHASAN

Penelitian ini menemukan hubungan dukungan informasi dari keluarga dengan kualitas hidup penderita stroke pada fase pasca akut. Nilai hubungan dukungan informasi keluarga adalah positif, yang berarti semakin meningkat nilai dukungan informasi dari keluarga sebanyak 1 kali maka akan meningkatkan kualitas hidup penderita stroke pada fase pasca akut sebanyak 40%. Sistem dukungan sosial pada keluarga akan memengaruhi perilaku hidup sehat. Anggota keluarga berperan penting dalam memberikan informasi pencegahan penyakit dan promosi kesehatan serta pemulihan akibat gangguan kesehatan (11). Sumber dukungan informasi adalah keluarga, yang berfungsi sebagai sebuah kolektor dan penyebar informasi. Keluarga merupakan sistem dasar tempat dimana perilaku kesehatan dan perawatan diatur, dilakukan dan dan dijalankan. Anggota keluarga memberikan promosi kesehatan dan perawatan kesehatan preventif, serta berbagai perawatan bagi anggota keluarganya yang sakit (16).

Penelitian ini menemukan hubungan dukungan penghargaan keluarga dengan kualitas hidup penderita stroke pada fase pasca akut. Nilai hubungan dukungan penghargaan keluarga adalah positif, yang berarti semakin meningkat nilai dukungan penghargaan sebanyak 1 kali maka akan meningkatkan kualitas hidup penderita stroke pada fase pasca akut sebanyak 13,8%. rang yang sakit perlu mendapatkan pengakuan dan dukungan dari anggota masyarakat (11). Dukungan penghargaan dari keluarga dapat mening- katkan status psikososial, sehingga mendapat pengakuan atas kemampuan dan keahlian yang dimiliki (16).

Penelitian menemukan tingkat pendidikan dan kualitas hidup penderita stroke berhubungan negatif. Hal ini menunjukkan bahwa penderita stroke yang kualitas hidup rendah memiliki latar belakang pendidikan tinggi. Sementara penelitian lain menunjukkan bahwa tingkat pendidikan tidak memiliki hubungan dengan kualitas hidup penderita stroke pasca akut (17,18). Penelitian lain menemukan responden yang memiliki pendidikan ≥12 tahun memiliki kualitas hidup yang lebih baik dibandingkan dengan kelompok responden yang memiliki pendidikan <12 tahun (19). Seseorang dengan latar belakang pendidikan tinggi lebih matang terhadap proses perubahan yang terjadi, sehingga lebih mudah menerima pengaruh dari luar yang positif, obyektif dan terbuka berbagai informasi tentang kesehatan (20).

Penelitian ini menemukan hubungan yang bermakna secara statistik antara skor barthel indeks seseorang dengan kualitas hidup pasien stroke pada fase pasca akut. Nilai hubungan antara skor barthel indek dengan kualitas hidup diperoleh positif, yang berarti semakin meningkat skor barthel indeks maka akan meningkatkan kualitas hidup penderita stroke sebanyak 27,8%. Penelitian lain menunjukkan hal serupa, Skor barthel indeks (Fungsional) secara statistik sangat signifikan menurunkan kualitas hidup pasien setelah 6 bulan pasca stroke dengan arah hubungan negatif antara tingkat keparahan stroke (21). Kemampuan pasien saat masuk perawatan berhubungan signifikan dengan kualitas hidup pasien stroke (17). Perbedaan nilai barthel indeks dapat terjadi akibat perbedaan manifestasi, sehingga menyebabkan tingkat ketergantungan yang berbeda pada setiap orang yang menderita stroke. Keterbatasan kemampuan fisik menyebabkan sebagian penderita stroke berfikir negatif dan kurang percaya diri sehingga berisiko meningkatkan keputusasaan. Hal ini dapat menyebabkan penurunan kualitas hidup (22).

Penelitian ini menemukan hubungan negatif bermakna secara statistik antara skor NIHSS seseorang dengan kualitas hidup pasien stroke pada fase pasca akut. Penderita stroke pasca akut yang kualitas hidupnya rendah, lebih membutuhkan perawatan pemulihan kondisi yang lebih tinggi. Penelitian lain menemukan semakin tinggi skor NIHSS (kecacatan), maka kualitas hidup penderita stroke semakin rendah. Pasien stroke dengan cacat parah memiliki kualtas hidup rendah (21,23). Kecacatan akibat stroke, menyebabkan kualitas hidup penderita menjadi rendah. Namun dengan perawatan yang baik, tidak semua pasien yang cacat akibat stroke mengalami ketergantungan. Apabila kecacatan individu dan ketergantungan dapat dikurangi, maka dapat meningkatkan kualitas hidup penderita stroke (24).

Penelitian ini tidak menemukan hubungan antara dukungan emosional dari keluarga dengan kualitas hidup penderita stroke pada fase pasca akut. Namun, nilai dukungan emosional keluarga adalah negatif, yang berarti semakin meningkat nilai dukungan emosional keluarga maka kualitas hidup pasien stroke pada fase pasca akut semakin rendah. Penelitian ini tidak sejalan dengan Yaslina (2011) menunjukkan bahwa terdapat hubungan antara dukungan emosional berhubungan dengan perawatan pasien pasca stroke (11). Dukungan emosional terkait dengan ekspresi, rasa empati dan perhatian terhadap anggota keluarga sehingga akan menimbulkan perasaan lebih baik, memperoleh kembali keyakinannya, merasa memiliki dan dicintai. Dukungan emosional dapat mengurangi dan mencegah efek stres serta meningkatkan kesehatan individu dan keluarga secara langsung (16).

Responden dengan dukungan instrumental tinggi sebesar 81 (50,31%) sedangkan responden dengan dukungan instrumental rendah sebesar 80 (49,69%). Hasil analisis multivariat menunjukkan bahwa tidak terdapat hubungan antara dukungan instrumental dari keluarga dengan kualitas hidup penderita stroke pada fase pasca akut (p-value: 0,173; koefisien b: -0,096). Namun nilai dukungan instrumental keluarga adalah negatif, yang berarti semakin meningkatnya nilai dukungan instrumental dari keluarga maka kualitas hidup pasien stroke pada fase pasca akut semakin rendah. Hal ini tidak sejalan dengan penelitian Yaslina (2011) menunjukkan bahwa terdapat hubungan antara dukungan instrumental dengan perawatan pasien pasca stroke. Keterbatasan fisik yang terjadi pada pasien pasca stroke menyebabkan mereka membutuhkan dukungan keluarga dalam melakukan aktivitas sehari-hari (11).

Dukungan instrumental berupa pertolongan praktis dan kongkrit dari anggota keluarga. Selain itu dukungan instrumental termasuk fungsi perawatan kesehatan keluarga dan fungsi ekonomi yang diterapkan terhadap anggota keluarga yang sakit. Bentuk dukungan instrumental bagi penderita stroke berupa bantuan dalam kebersihan diri, membantu dalam kegiatan MCK, memberikan ketenangan dirumah, penyiapan dana untuk berobat, membantu melakukan latihan pergerakan tubuh, perlindungan terhadap bahaya lingkungan (16).

Hasil analisis multivariat menunjukkan bahwa tidak terdapat hubungan antara umur dengan kualitas hidup dengan penderita pasien stroke pada fase pasca akut. Nilai hubungan menunjukkan bahwa semakin

bertambah umur seseorang maka kualitas hidup pasien stroke pada fase pasca akut akan semakin menurun. Penelitian ini sejalan dengan Rahmi (2011) menunjukkan bahwa umur tidak berhubungan dengan kualitas hidup pasien stroke (18). Umur merupakan faktor yang memiliki hubungan dengan kualitas hidup pasien enam bulan pasca stroke, dimana semakin meningkatnya usia maka kualitas hidup semakin menurun (21). Kualitas hidup pasien stroke yang berusia ≥75 tahun memiliki kualitas hidup lebih rendah dibandingkan dengan pasien stroke yang berusia 19-64 tahun (25). Usia sangat berhubungan dengan perkembangan status kesehatan pasien serta diidentifikasi sebagai faktor yang berhubungan dengan kemampuan pasien dalam menentukan tindakan dalam memenuhi kebutuhan perawatan diri dan kemampuan untuk merawat diri. Pada usia dewasa, seseorang menggunakan energi sesuai kemampuan untuk menyesuaikan konsep diri dan citra tubuh terhadap realitas fisiologis dan perubahan penampilan fisik. Harga diri yang tinggi, citra tubuh yang bagus dan sikap positif terhadap perubahan fisiologis muncul jika pada usia dewasa menengah mengikuti latihan fisik, diet seimbang, tidur yang adekuat dan melakukan hygiene yang baik sehingga meningkatkan kualitas hidup pasien (11).

Penelitian ini tidak menemukan hubungan jenis kelamin dengan kualitas hidup pasien. Penelitian ini sejalan dengan penelitian sebelumnya yang menunjukkan tidak ada hubungan antara kualitas hidup pasien stroke laki-laki dengan perempuan (18,19). Namun penelitian lain justru menemukan perempuan memiliki kualitas hidup lebih rendah daripada laki- laki. Hal ini disebabkan karena perempuan lanjut usia mengalami stroke lebih parah serta kurang dukungan dari keluarga (21). Jenis kelamin berkaitan dengan beberapa pola kesehatan dan sakit. Dibandingkan laki-laki, perempuan cenderung lebih mudah mengekspresikan penyakit kronik yang dialami (11). Perempuan secara konsisten memiliki lebih banyak informasi kesehatan daripada laki-laki karena peran kesehatan mereka dalam keluarga (16).

Penelitian ini tidak menemukan hubungan bermakna dengan kualitas hidup penderita stroke pada fase pasca akut. Hal ini karena dengan bekerja dapat membantu kondisi keuangan keluarga, selain itu dengan bekerja dapat membantu pada arah pemulihan fisik, meningkatkan rasa percaya diri serta mengurangi depresi. Seseorang yang menderita stroke mengalami cacat dan gangguan sulit untuk memulihkan kondisi fisik sepenuhnya serta akan kehilangan rasa percaya diri. Sehingga sewaktu masa pemulihan, selain pemulihan secara fisik, pemulihan secara psikologis juga penting untuk dilakukan (25).

Penelitian ini tidak menemukan hubungan pekerjaan dengan kualitas hidup penderita stroke pada fase pasca akut. Penderita stroke dengan tingkat ekonomi rendah memiliki kualitas hidup lebih rendah dibandingkan dengan penderita stroke dengan status ekonomi tinggi. Status ekonomi menjadi sangat penting karena dapat membantu mengurangi depresi yang timbul pada pada pasien stroke (25).

Penelitian lain menemukan bukti bahwa responden yang menikah memiliki kualitas hidup lebih baik bila dibandingkan dengan responden yang tidak menikah (duda/janda) (26). Status perkawinan merupakan satu bentuk dukungan sosial terhadap penderita stroke, karena pasangan hidup dapat memberikan dukungan kepada pasangan untuk menjalankan perilaku hidup sehat dan positif (22).

Penelitian ini menemukan hubungan antara tempat tinggal dengan kualitas hidup pasien stroke pada fase pasca akut. Penelitian ini tidak sejalan dengan penelitian sebelumnya yang menunjukkan hubungan antara kualitas hidup penderita stroke dengan tempat tinggal. Penderita stroke yang tinggal di pedesaan (rural) memiliki kualitas hidup lebih rendah dibandingkan dengan oenderita stroke yang hidup di perkotaan (urban). Hal ini disebabkan karena perbedaan tingkat ekonomi antara wilayah rural dan urban, setiap wilayah memiliki masalah kesehatan yang berbeda akibat dari layanan kesehatan yang diberikan karena kondisi geografis, serta sulitnya transportasi dan akses pelayanan kesehatan (25).

Penelitian tentang penyakit kronis di Polandia menunjukkan bahwa terdapat hubungan antara tempat tinggal dengan kualitas hidup penderita penyakit kronis. Pada domain psikologis dan lingkungan, skor lebih tinggi ditemukan pada responden yang tinggal di wilayah pedesaan dibandingkan dengan responden yang tinggal di perkotaan (27).

SIMPULAN

Dukungan informasi dan dukungan penghargaan adalah faktor yang berhubungan dengan kualitas hidup penderita stroke pada fase pasca akut, sedangkan dukungan emosional dan dukungan penghargaan tidak berhubungan dengan kualitas hidup penderita stroke pada fase pasca akut.

Keluarga perlu aktif membantu penderita dalam beraktivitas sehari-hari, mendengar keluhan, melibatkan dalam musyawarah dan kegiatan keluarga dan

mencarikan solusi. Perlu promosi edukasi kesehatan tentang dukungan keluarga.

Abstrak

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan dukungan keluarga (emosional, informasi, instrumental dan penghargaan) dengan kualitas penderita stroke pada fase pasca akut di Wonogiri. **Metode:** Sebuah penelitian *cross-sectional* dilakukan melibatkan wawancara dan penggunaan data rekam medis 161 penderita stroke pasca akut di Wonogiri. **Hasil:** Penelitian menunjukkan bahwa terdapat hubungan dukungan informasi, dan dukungan peng- hargaan dengan kualitas hidup penderita stroke pasca akut. **Simpulan:** Penelitian ini menegaskan pentingnya dukungan keluarga dalam hal dukungan informasi dan penghargaan untuk kualitas hidup pasien dengan stroke pasca-akut.

Kata Kunci: dukungan keluarga; kualitas hidup; stroke pasca akut

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HUBUNGAN DUKUNGAN KELUARGA DENGAN KUALITAS HIDUP PASIEN PASCA STROKE DI WILAYAH KERJA PUSKESMAS BANJARSARI METRO

CORRELATION OF FAMILY SUPPORT WITH LIFE QUALITY POST STROKE PATIENTS IN THE WORKING AREA HEALTH CENTER BANJARSARI METRO

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ABSTRAK

Stroke merupakan penyakit kronis yang mengenai sistem saraf, penyakit ini memiliki problematika pasca stroke yang dapat menurunkan kualitas hidup bagi penderita. Keluarga merupakan orang terdekat yang memiliki peranan penting dalam merawat penderita stroke. Tujuan penelitian ini adalah untuk mengetahui hubungan dukungan keluarga terhadap Kualitas Hidup Pasien Pasca Stroke di Wilayah Kerja Puskesmas Banjarsari Metro tahun 2018. Jenis penelitian analitik, rancangan *cross sectional*. Populasi dalam penelitian ini adalah pasien pasca stroke yang tercatat pada tahun 2018 yaitu sebanyak 27 orang, teknik pengambilan sampel total sampling. Analisis menggunakan uji *Person product moment*. Hasil: Rata-rata dukungan keluarga pada pasien pasca stroke adalah 70,63±2,483 dan rata-rata kualitas hidup pasien pasca stroke adalah 120,04±4,328. Hasil analisis didapatkan *r*= 0,774; *p-value* 0,000<*α 0,05* artinya ada hubungan antara dukungan keluarga dengan kualitas hidup pasien pasca stroke. Nilai korelasi yang didapatkan termasuk dalam kategori kuat dengan arah korelasi positif. Kesimpulan: Dukungan keluarga terbukti memiliki hubungan kuat terhadap kualitas hidup pasien pasca stroke. Diharapkan keluarga terus berupaya memberikan dukungan secara maksimal agar kualitas hidup pasien pasca stroke mengalami peningkatan.

Kata Kunci : Dukungan keluarga, kualitas hidup pasien pasca stroke.

ABSTRACT

Stroke is a chronic disease affecting the nervous system, this disease has post-stroke problems that can reduce the quality of life for sufferers. The family is the closest person who has an important role in treating stroke patients. The purpose of this study was to determine the relationship of family support to the Quality of Life for Post-Stroke Patients in the Work Area of Banjarsari Metro Health Center in 2018. Methods: Type of analytic research, cross sectional design. The population in this study were post-stroke patients recorded in 2018 as many as 27 people, total sampling technique. The analysis uses the Person product moment test. Results: The average family support for post-stroke patients is 70.63 ± 2.483 and the average quality of life for post-stroke patients is 120.04 ± 4.328. The analysis results obtained r = 0.774; p-value 0,000 <0,05 means that there is a relationship between family support and the quality of life of post-stroke patients. The correlation value obtained is included in the strong category with a positive correlation direction. Conclusion: Family support has been shown to have a strong relationship to the quality of life of post-stroke patients. It is expected that families continue to strive to provide maximum support so that the quality of life of post-stroke patients increases.

Keywords : Family support, quality of life for post-stroke patients.

PENDAHULUAN

Gaya hidup tidak sehat saat ini telah banyak menimbulkan masalah kesehatan di masyarakat terutama pada gangguan sistem kardiovaskuler. Penyakit kardiovaskuler merupakan penyebab utama kematian di dunia yang banyak disebabkan oleh gaya hidup kurang sehat. Setiap tahunnya diperkirakan terjadi 17,5 juta orang meninggal karena penyakit ini yang mewakili 31% dari seluruh kematian secara global. Dari jumlah kematian tersebut, 7,4 juta diantaranya disebabkan penyakit jantung koroner dan 6,7 juta karena stroke[1]. Stroke merupakan istilah yang digunakan untuk menggambarkan perubahan neurologis yang disebabkan oleh adanya gangguan suplai darah ke bagian dari otak. Jenis stroke yang utama adalah iskemik dan hemoragik. Jumlah total stroke iskemik sekitar 83% dari seluruh kasus stroke. Sisanya sebesar 17% adalah stroke hemoragik. Di Amerika Serikat sekitar 550.000 orang mengalami stroke setiap tahun. Ketika stroke yang kedua kalinya dimasukkan dalam kondisi tersebut, angka kejadian meningkat menjadi 700.000 per tahun[2].

Angka kejadian stroke di Indonesia juga cenderung mengalami peningkatan, pada hasil Riskesdas 2007 insiden stroke di Indonesia adalah 8,3 per 1.000 penduduk, dan pada hasil Riskesdas 2013 mengalami peningkatan yaitu menjadi 12,1 per 1.000 penduduk dan merupakan penyebab kematian utama hampir di semua rumah sakit di Indonesia yakni mencapai 14,5%. Jumlah penderita penyakit stroke di Indonesia tahun 2013 berdasarkan diagnosis tenaga kesehatan (Nakes) diperkirakan sebanyak 1.236.825 orang (7,0‰), sedangkan berdasarkan diagnosis Nakes/gejala diperkirakan sebanyak 2.137.941 orang (12,1‰). Angka kejadian stroke Provinsi Lampung tergolong tinggi dari diagnosa tenaga kesehatan (Nakes) yaitu diperkirakan mencapai 42.815 dan pada diagnosis Nakes/gejala 68.393. Prevalensi stroke berdasarkan diagnosa/gejala tiga besar tertinggi adalah kabupaten Waykanan dan Lampung Tengah masing-masing 0.9%, dan terendah kabupaten Tulangbawang sebesar 0.2% sedangkan untuk wilayah Kota Metro adalah sebesar 0,5%[3].

Berdasarkan data yang tercatat di Kasie Surveilans & Epidemiologi Dinas Kesehatan Kota Metro menunjukkan bahwa jumlah penderita stroke mencapai 482 kasus sedangkan pada laporan terakhir 2016 jumlah kasus baru stroke ditemukan sebanyak 70 kasus. Untuk Wilayah Kerja Puskesmas Banjarsari sebanyak 27 kasus[9].

Peningkatan angka kejadian stroke saat ini dapat dipengaruhi oleh berbagai faktor diantaranya adalah hipertensi, obesitas, kolesterol darah tinggi, adanya riwayat penyakit jantung, diabetes mellitus, gaya hidup tidak sehat seperti perilaku merokok dan stress[4]. Selain faktor tersebut, faktor usia juga merupakan faktor utama yaitu semakin meningkatnya usia maka risiko stroke semakin meningkat dan stroke juga banyak ditemukan pada pria dibandingkan pada wanita[5].

Sebagai penyakit kronis yang mengenai sistem saraf, maka penyakit ini memiliki problematika pasca stroke seperti kelumpuhan pada salah satu

sisi tubuh (hemiparese/hemiplegia), lumpuh pada salah satu sisi wajah, tonus otot lemah atau kaku, menurun/hilangnya rasa, gangguan lapang pandang, gangguan bahasa, gangguan persepsi dan gangguan status mental, termasuk gangguan kognitif dan fungsi memori. Sebagian besar pasien pasca stroke akan mengalami tanda-tanda ini sebagai gelaja sisa pasca stroke. Terakumulasinya berbagai gejala sisa pasca stroke, baik fisik maupun psikis ini akan mengakibatkan problematika yang lebih luas. Problematika ini antara lain problematika ketidakmampuan fungsi dasar, ketidakmampuan dalam beraktifitas sehari-hari, ketidakmampuan bersosialisasi, kemunduran fungsi kognitif sampai dengan problematika psikologis. Demikian pula akibat lanjut problematika pasca stroke adalah ketidakmandirian pasien yang akan menjadikan kualitas hidup pasien pasca stroke rendah[6].

Kualitas hidup pada pasien stroke dianggap sebagai salah satu cara yang paling penting untuk mengukur *outcome* stroke, tetapi hanya sedikit perhatian yang diberikan pada penelitian tentang kualitas hidup[7]. Kualitas hidup penderita pasca stroke dapat mengalami gangguan atau hambatan. Oleh karena itu dukungan sosial keluarga juga berperan dalam meningkatkan kualitas hidup penderita pasca stroke[8].

Dukungan sosial keluarga adalah sumber daya eksternal utama. Sifat dukungan sosial dan pengaruhnya pada penyelesaian masalah telah diteliti secara ekstensif dan telah terbukti sebagai moderator stres kehidupan yang efektif. Dukungan sosial keluarga dapat membuat orang percaya bahwa dirinya diperhatikan atau dicintai, dukungan keluarga juga menyebabkan seseorang merasa bahwa dirinya dianggap atau dihargai. Selain itu, dukungan keluarga juga membuat seseorang merasa bahwa dirinya merupakan bagian dari jaringan komunikasi dan saling ketergantungan.

Berdasarkan uraian di atas, maka penulis tertarik untuk melakukan penelitian tentang hubungan dukungan keluarga terhadap Kualitas Hidup Pasien Pasca Stroke di Wilayah Kerja Puskesmas Banjarsari Metro.

METODE

Jenis penelitian ini analitik menggunakan desain *cross sectional*. Populasi dalam penelitian ini adalah pasien pasca stroke di Wilayah Kerja Puskesmas Banjarsari Metro yang berjumlah 27 orang dan seluruhnya dijadikan sampel (*total sampling).* Pengumpulan data untuk mengukur kualitas hidup dilakukan menggunakan *stroke specific quality of life scale (SSQOL)* dan untuk mengukur dukungan keluarga menggunakan kuesioner.

HASIL

Berdasarkan pengumpulan dan analisis data maka didapatkan hasil penelitian sebagai berikut.

Tabel 1
Distribusi Usia Pasien Pasca Stroke di Wilayah Kerja Puskesmas Banjarsari Metro

Variabel	*N*	*Mean*	SD	Min-Max	CI;95%
Usia	27	60,59	7,792	43-79	57,51-63,67

Berdasarkan tabel 1, dapat dijelaskan bahwa rata-rata usia pasien pasca stroke adalah 60,59±7,792 tahun dengan usia termuda 43 tahun dan usia paling tua adalah 79 tahun.

Tabel 2
Distribusi Karakteristik Pasien Pasca Stroke Berdasarkan Jenis Kelamin, Pendidikan & Pekerjaan di Wilayah Kerja Puskesmas Banjarsari Metro

Variabel	F	Peresentase(%)
Jenis Kelamin		
Laki-laki	13	48,1
Perempuan	14	51,9
Jumlah	**27**	**100**
Pendidikan		
SD	17	63,0
SMP	4	22,2
SMA	6	14,8
Jumlah	**27**	**100**
Pekerjaan		
IRT	14	51,9
Tani	6	22,2
Wiraswasta	7	25,9
Jumlah	**27**	**100**

Berdasarkan tabel 2, dapat dijelaskan bahwa dilihat dari jenis kelamin, sebagian besar pasien pasca stroke adalah perempuan yaitu sebanyak 14 orang (51,9%) dan laki-laki 13 orang (48,1%). Dilihat dari tingkat pendidikan sebagian besar adalah lulusan SD yaitu sebanyak 17 orang (63,0%), SMA 6 orang (17,8%) dan SMP 4 orang (22,2%). Adapun pekerjaan. Sedangkan dilihat dari pekerjaan sebagian besar adalah IRT yaitu sebanyak 14 orang (51,9%), wiraswasta 7 orang (25,9%) dan tani 6 orang (22,2%).

Tabel 3
Distribusi Dukungan Keluarga dan Kualitas Hidup Pasien Pasca Stroke di Wilayah Kerja Puskesmas Banjarsari Metro

Variabel	Mean	SD	Minimum-Maksimum	CI; 95%
Dukungan keluarga	70,63	2,483	64-75	69,65-71,61
QOL Pasca Stroke	120,04	4,328	110-127	118,33-121,75

Berdasarkan tabel 3, dapat dijelaskan bahwa skor rata-rata dukungan keluarga pada pasien pasca stroke adalah 70,63±2,483. Skor tertinggi dukungan keluarga adalah 75 dan skor terendah 64. Sedangkan rata-rata skor kualitas hidup pasien pasca stroke adalah 120,04±4,328. Skor tertinggi kualitas hidup pasien pasca stroke adalah 127 dan skor terendah 110.

Tabel 4
Hubungan Dukungan Keluarga dengan Kualitas Hidup Pasien Pasca Stroke di Wilayah Kerja Puskesmas Banjarsari Metro

Variabel	*Mean*	*SD*	*p-value*	*r*	*N*
Dukungan Keluarga	70,63	2,483	0,000	0,774	27
QOL Pasca stroke	120,04	4,328			

Berdasarkan tabel 4, dapat diketahui bahwa pada hasil analisis dengan menggunakan korelasi *Person Product Moment* diperoleh rata-rata dukungan keluarga pada pasien pasca stroke adalah 70,63±2,483 dan rata-rata skor kualitas hidup adalah 120,04±4,328. Pada hasil uji statistik didapatkan nilai *p-value=0,000 ($p<\alpha$ 0,05)* yang menunjukkan ada hubungan antara dukungan keluarga dengan kualitas hidup pasien pasca stroke. Hasil korelasi Pearson didapatkan nilai sebesar 0,774 arah korelasi positif dengan kekuatan hubungan kuat, artinya semakin tinggi dukungan keluarga maka akan semakin meningkatkan kualitas hidup pasien pasien pasca stroke.

PEMBAHASAN

Distribusi Dukungan Keluarga pada Pasien Pasca Stroke

Hasil penelitian menunjukkan bahwa rata-rata skor dukungan keluarga pada pasien pasca

stroke adalah 70,63±2,483. Skor tertinggi dukungan keluarga adalah 75 dan skor terendah 64. Pada *confidence interval* 95% diyakini bahwa rata-rata skor dukungan keluarga pada pasien pasca stroke adalah antara 69,65 sampai dengan 71,61.

Dukungan keluarga adalah sesuatu yang penting bagi individu yang membutuhkan sehingga individu tersebut memahami dan tahu bahwa dirinya diperhatikan. Dukungan keluarga sendiri meliputi dukungan instrumental, dukungan informasional, dukungan penilaian (Appraisal) dan yang terakhir adalah dukungan emosional[10].

Keluarga merupakan orang terdekat yang selalu berinteraksi dengan pasien pasca stroke sehingga peranan keluarga sangat penting dalam upaya memberikan berbagai dukungan untuk menciptakan rasa aman bagi pasien. Pada penelitian ini, skor tertinggi yang mungkin didapatkan pada variabel dukungan keluarga adalah 96 dan pada hasil penelitian skor rata-rata dukungan keluarga pada pasien pasca stroke adalah 70,63±2,483 atau setara dengan nilai tengah, hal ini menggambarkan bahwa dukungan yang diberikan keluarga terhadap pasien pasca stroke tergolong tinggi dengan demikian maka dukungan tersebut diharapkan mampu memberikan kontribusi bagi kualitas hidup pasien pasca stroke.

Distribusi Frekuensi Kualitas Hidup Pasien Pasca Stroke

Hasil penelitian yang menunjukkan bahwa rata-rata skor kualitas hidup pasien pasca stroke adalah 120,04±4,328. Skor tertinggi kualitas hidup pasien pasca stroke adalah 127 dan skor terendah 110. Pada *confidence interval* 95% diyakini bahwa rata-rata skor kualitas hidup pasien pasca stroke adalah antara 118,33 sampai dengan 121,75.

Kualitas hidup merupakan persepsi individu terhadap posisi mereka dalam konteks budaya dan nilai dimana mereka hidup dan dalam hubungannya dengan tujuan hidup, harapan, standar dan perhatian. Hal ini merupakan konsep yang luas yang mempengaruhi kesehatan fisik seseorang, keadaan psikologis, tingkat ketergantungan, hubungan sosial, keyakinan personal dan hubungannya dengan keinginan dimasa yang akan datang[10]. Beberapa problematika pasca stroke yang menjadikan kualitas hidup pasien pasca stroke rendah diantaranya adalah ketidakmampuan fungsi dasar, ketidakmampuan dalam beraktivitas sehari-hari, ketidakmampuan bersosialisasi, kemunduran fungsi kognitif dan gangguan psikologis[6].

Berdasarkan uraian di atas dapat dijelaskan bahwa rata-rata kualitas hidup pasien pasca stroke berada dibawah nilai tengah atau relatif memiliki kualitas hidup yang rendah, hal ini terjadi karena stroke merupakan salah satu penyakit yang memiliki berbagai komplikasi dan berdampak pada keterbatasan fungsional baik bersifat fisik maupun mental sehingga pasien akan memiliki tingkat ketergantungan pada orang lain yang tinggi dan seiring berjalannya waktu maka akan menurunkan keyakinan dan pandangan hidup pasien.

Hubungan Dukungan Keluarga dengan Kualitas Hidup Pasien Pasca Stroke

Hasil uji statistik menggunakan *Person Product Moment* diperoleh rata-rata dukungan keluarga pada pasien pasca stroke adalah 70,63±2,483 dan rata-rata skor kualitas hidup adalah 120,04±4,328. Pada hasil uji statistik didapatkan nilai *p-value=0,000 (p<α 0,05)* yang menunjukkan ada hubungan antara dukungan keluarga dengan kualitas hidup pasien pasca stroke. Hasil korelasi Pearson didapatkan nilai sebesar 0,774 arah korelasi positif dengan kekuatan hubungan kuat, artinya semakin tinggi dukungan keluarga maka akan semakin meningkatkan kualitas hidup pasien pasien pasca stroke.

Penelitian ini sesuai dengan teori bahwa dukungan keluarga merupakan sebuah perjalanan dalam kehidupan yang memiliki sifat dan jenis dukungan sosial yang berbeda antara satu individu dengan individu lainnya. Namun demikian, dalam semua tahap siklus kehidupan, besar kecilnya dukungan yang diberikan oleh keluarga akan memberikan manfaat yang banyak termasuk dalam upaya meningkatkan kesehatan keluarga[12]. Terakumulasinya berbagai gejala sisa pasca stroke, baik fisik maupun psikis ini akan mengakibatkan problematika yang lebih luas. Problematika ini antara lain problematika ketidakmampuan fungsi dasar, ketidakmampuan dalam beraktifitas sehari-hari, ketidakmampuan bersosialisasi, kemunduran fungsi kognitif sampai dengan problematika psikologis. Demikian pula akibat lanjut problematika pasca stroke adalah ketidakmandirian pasien yang akan menjadikan kualitas hidup pasien pasca stroke rendah. Kualitas hidup yang menurun dapat mempengaruhi semangat hidup penderita. Oleh karena itu dukungan sosial keluarga juga berperan dalam meningkatkan kualitas hidup penderita pasca stroke[6].

Hasil penelitian ini sejalan dengan penelitian sebelumnya bahwa pada analisis spearman rank dukungan keluarga yang mencakup dukungan emosional, informasi, instrumental dan penghargaan terbukti berhubungan dengan kualitas hidup pasien pasca stroke (p<0,05)[13].

Berdasarkan uraian hasil penelitian di atas dapat dijelaskan bahwa dukungan keluarga terbukti memiliki korelasi positif dalam kategori kuat terhadap kualitas hidup pasien pasca stroke. Hal ini dapat terjadi karena dukungan keluarga merupakan sumber daya eksternal utama yang secara ekstensif mampu menjadi moderator stres kehidupan bagi pasien sehingga pasien merasa bahwa dirinya diperhatikan atau dicintai, dihargai serta masih menjadi bagian dari keluarga yang dibutuhkan. Oleh karena itu, jelaslah bahwa keluarga memiliki peranan penting dalam meningkatkan kualitas hidup pasien pasca stroke sehingga upaya untuk meningkatkan kualitas hidup pasien pasca stroke dapat dilakukan melalui pendekatan keluarga dimana keluarga diharapkan dapat memberikan dukungan pada pasien pasca stroke baik berbentuk dukungan instrumental, informasional, appraisal, maupun emosional.

KESIMPULAN

Terdapat hubungan dukungan keluarga dengan kualitas hidup pasien pasca stroke (r= 0,774; *p-value* 0,000< α *0,05*).

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HUBUNGAN DUKUNGAN KELUARGA DENGAN Quality of Life (QOL) PADA KEJADIAN STROKE

Relationship Of Family Support With Quality of Life (QOL) Stroke Occurrence

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ABSTRAK

World Health Organization (WHO) menyebutkan bahwa tanda-tanda klinis yang berkembang cepat akibat gangguan fungsi otak fokal atau global karena adanya sumbatan atau pecahnya pembuluh darah di otak yang berlangsung selama 24 jam atau lebih.Penelitian ini bertujuan untuk mengetahui Hubungan Dukungan Keluarga Dengan *Quality of Life* pada Kejadian Stroke Di Poli Saraf Rumah Sakit Umum Daerah Haji Makassar Tahun 2017 . Desain penelitian adalah observasional dengan pendekatan *cross sectional*. Sampel berjumlah 54 dengan menggunakan teknik simple random sampling. Hasil penelitian diperoleh dukungan informasional dengan nilai x2 hitung (4,352) > x2 tabel (3,841), dukungan emosional nilai p (0,751) > 0,05, dukungan instrumental dengan nilai p(0,346) > 0,05, dukungan penghargaan dengan nilai x2 hitung (5,178) > x2 tabel (3,841). Berdasarkan hasil penelitian maka kesimpulan pada penelitian ini diperoleh bahwa ada hubungan dukungan informasional dan dukungan penghargaan, Sedangkan dukungan emosional dan dukungan instrumental tidak berhubungan dengan *Quality of Life* kejadian stroke. Penelitian ini menyarankan kepada keluarga agar lebih banyak memberikan dukungan kepada pasien sehingga dapat meningkatkan kualitas hidupnya.

Kata Kunci : Dukungan keluarga dan *quality of life*

ABSTRACT

World Health Organization (WHO) states that the clinical signs that develop rapidly due to focal or global brain function disorders due to a blockage or rupture of blood vessels in the brain that lasted for 24 hours or more.This study aims to determine the Family Support Relationship With Quality of Life on Stroke Occurrence at Poly Nerve General Hospital of Makassar Hajj Area 2017. The research design was observational with cross sectional approach. Sample amounted to 54 by using simple random sampling technique. The result of the research was obtained by informational support with x2 count (4,352)> x2 table (3,841), emotional support p value (0,751) > 0,05, instrumental support with p value (0,346)> 0,05, award support with value x2 count (5,178)> x2 table (3,841). Based on the results of the study, the conclusion of this study found that there is a relationship of informational support and awards support, While emotional support and instrumental support is not associated with Quality of Life stroke incidence. This study suggests to families to provide more support to patients so as to improve the quality of life.

Keywords *: Family Support and Quality of Life (QOL)*

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PENDAHULUAN

Quality of Life merupakan persepsi individu mengenai posisi individu dalam hidup dalam konteks budaya dan sistem nilai dimana individu hidup dan hubungannya dengan Pendekatan yang digunakan dalam tujuan, harapan, standar yang ditetapkan. Kualitas hidup yang menurun dapat mempengaruhi semangat hidup penderita dan keluarga yang mengasuh sehingga dapat mempengaruhi penurunan kualitas hidup penderita. (Fayers, P. M., & Machin, D., 2013)

WHO *(World Health Organization)* menetapkan bahwa stroke merupakan suatu sindrom klinis dengan gejala berupa gangguan fungsi otak secara fokal atau global yang dapat menimbulkan kematian atau kelainan yang menetap lebih dari 24 jam, tanpa penyebab lain selain gangguan vasculer. Berdasarkan laporan *World Health Organization* (WHO) 2012, diperkirakan setiap tahun terdapat 15 juta orang di seluruh dunia yang mengalami stroke dan dari jumlah tersebut terdapat kurang lebih 5 juta orang meninggal dan 5 juta mengalami kecacatan permanen akibat gejala sisa stroke dan menjadi beban keluarga. Insiden stroke di negara berkembang cenderung meningkat (Yulia Ovina, 2013).

Data CDC (2013) menunjukkan bahwa stroke merupakan penyebab kematian dan kecacatan terbanyak ketiga. Sekitar 795.000 penduduk di Amerika terkena stroke setiap tahunnya, ini berarti bahwa stroke dapat terjadi setiap 40 detik. Dari jumlah tersebut, 610.000 diantaranya adalah serangan stroke pertama, sedangkan 185.000 merupakan stroke berulang (Martini, 2014).

Penyakit serebrovaskuler (stroke) merupakan penyebab kematian di Amerika Serikat menempti urutan ketiga setelah penyakit jantung dan kanker. Angka kematian dari tahun ke tahun akibat kasus stroke baru atau rekuren ialah lebih dari 200.000 orang (Caroline G. Senaen, 2014).

Angka kecacatan akibat stroke cukup tinggi dan stroke menjadi penyebab kecacatan paling tinggi di Amerika Serikat. Angka kecacatan akibat stroke hanya sekitar 29% apabila penderita dengan gejala stroke segera memperoleh pertolongan medis, sedangkan 53% penderita dapat sembuh, dan 18% penderita lainnya meninggal dunia (Sari,2012) dalam (Rahayu, 2015). Sedangkan angka kejadian stroke di Eropa berdasarkan laporan (WHO, 2016) terdapat sekitar 650.000 setiap tahun (Febi Erawantini 2016).

Jumlah penderita stroke di seluruh dunia di perkirakan mencapai 50 juta jiwa dan 9 juta diantaranya menderita cacat berat. Yang lebih memprihatinkan 10% diantara penderita stroke mengalami kematian (Yulia Ovina, 2013).

Di negara-negara ASEAN penyakit stroke juga merupakan masalah kesehatan utama yang menyebabkan kematian. Dari data *South East Asian Medical Information Center* (SEAMIC) diketahui bahwa angka kematian stroke terbesar terjadi di Indonesia yang kemudian diikuti secara berurutan oleh Filipina, Singapura, Brunei, Malaysia dan Thailand (Cintya Agreayu Dinata, 2012).

Prevalensi stroke di Indonesia setiap tahun sekitar 500.000 orang penduduk terkena serangan stroke, dan sekitar 2,5% atau 250.000 orang meninggal dan sisanya cacat ringan maupun berat (Woro Riyadina 2011). Prevalensi stroke di Indonesia berdasarkan diagnosis tenaga kesehatan sebesar 7 per mil dan yang terdiagnosis tenaga kesehatan atau gejala sebesar 12,1 per mil. Prevalensi Stroke berdasarkan diagnosis nakes tertinggi di Sulawesi Utara (10,8%), diikuti DI Yogyakarta (10,3%), Bangka Belitung dan DKI Jakarta masing-masing 9,7 per mil. Prevalensi Stroke berdasarkan terdiagnosis nakes dan gejala tertinggi terdapat di Sulawesi Selatan (17,9%), DI Yogyakarta (16,9%), Sulawesi Tengah (16,6%), diikuti Jawa Timur sebesar 16 per mil (Riskesdas, 2013).

Berdasarkan data Survailans Penyakit tidak menular Bidang P2PL Dinas Kesehatan Provinsi Sulawesi Selatan tahun 2014 bahwa terdapat stroke penderita lama sebanyak 1.811 kasus dan penderita baru sebanyak 3.512 kasus dengan 160 kematian (Sul-Sel, 2015). Data Riskesdas 2013 menunjukkan bahwa insiden stroke tertinggi di Sulawesi Selatan yaitu kabupaten pare-pare 12,6%, pinrang 10,8% kemudian soppeng 10,6% (Riskesdas, 2013).

Berdasarkan data yang diperoleh dari

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Rekam Medik Rumah Sakit Umum Daerah Haji Makassar Tahun 2015 terdapat pasien stroke sebanyak 188 orang, terdiri atas 82 orang laki-laki dan 106 orang perempuan. Pada tahun 2016 mengalami peningkatan dengan jumlah 205 orang, yang terdiri atas 88 orang laki-laki dan 119 perempuan. Pada tahun 2017 dari bulan januari-mei sebanyak 87 orang, yang terdiri atas 35 orang laki-laki dan 52 orang perempuan.

Quality of Life sangat berkaitan dengan dukungan keluarga, Dukungan keluarga diartikan sebagai bagian dari dukungan sosial, merupakan bentuk interaksi antar individu yang memberikan kenyamanan fisik dan psikologis melalui terpenuhinya kebutuhan akan afeksi serta keamanan (Fuji Rahmawati, 2014). Dukungan keluarga termasuk dalam faktor pendukung (*supporting factors*) yang dapat mempengaruhi perilaku dan gaya hidup seseorang sehingga berdampak pada status kesehatan dan kualitas hidupnya (Sinaga, 2014).

Dukungan keluarga sangat diperlukan pasien stroke untuk dapat bertahan dalam menjalani hidup, karena keluarga merupakan bagian terdekat dari pasien. Dukungan keluarga akan membuat pasien stroke merasa dihargai dan diterima, sehingga dapat meningkatkan semangat dan motivasi dalam dirinya. Rendahnya dukungan keluarga pada pasien stroke, akan mempengaruhi kondisi psikologi pasien. Pasien dapat menarik diri dari pergaulan dan merasa lebih sensitif, sehingga pasien lebih mudah tersinggung (Martini, 2014).

Berdasarkan uraian diatas, maka perlu dilakukan penelitian mengenai "hubungan dukungan keluarga dengan *Quality of Life* pada kejadian stroke di Poli Saraf Rumah Sakit Umum Daerah Haji Makassar".

METODE PENELITIAN

Jenis penelitian yang digunakan adalah penelitian *observasional* dengan pendekatan *cross sectional study* untuk mengetahui hubungan variabel independen dan variabel dependen yang diamati dalam priode waktu yang sama. Penelitian ini dilaksanakan di Rumah Sakit Umum Daerah Haji Makassar dan dilakukan pada bulan Juni sampai Juli. Populasi dalam penelitian ini adalah seluruh pasien yang menderita stroke di Rumah Sakit Umum Daerah Haji Makassar. Sampel dalam penelitian ini adalah sebagian pasien yang menderita stroke di Rumah Sakit Umum Daerah Haji Makassar dengan teknik pengambilan sampel secara *simple random sampling* sebanyak 54 sampel dan analisis data menggunakan program SPSS dengan uji chi-square.

HASIL PENELITIAN

Hasil Analisis Univariat bahwa jenis kelamin laki-laki sebanyak 56,3% dan perempuan 53,7%, umur tertinggi 63-71 tahun , pendididkan tertinggi SMA sebanyak 22,2% dari 54 orang sampel penderita Stroke, pekerjaan tertinggi Wiraswasta sebanyak 24,1% dari 54 sampel.

Tabel 1. Karakteristik Responden

Karakteristik	n	%
Jenis kelamin		
Laki-laki	25	46,3
Perempuan	29	53,7
Kelompok Umur		
27-35	3	5,6
36-44	7	13,0
45-53	12	22,2
54-62	10	18,5
63-71	13	24,1
71-79	8	14,8
>80	1	1,9
Tingkat pendidikan		
Tidak Sekolah	2	3,7
SD	6	11,1
SMP	12	22,2
SMA	21	38,9
Perguruan tinggi	13	24,1
Pekerjaan		
Tidak Bekerja	6	11,1
IRT	14	25,9
Wiraswasta	13	24,1
Guru	4	7,4
PNS	7	13,0
Pensiun	10	18,5
Jumlah	**54**	**100,0**

Sumber: Data Primer 2017

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Analisis dukungan keluarga dengan *Quality of Life*

Hasil Penelitian menunjukan dari 27 pasien terdapat yang mendapat dukungan informasional kurang dan memiliki *Quality of Life* kurang sebanyak 44,4%. Sedangkan dari 27 pasien yang mendapat dukungan informasional cukup dan memiliki *Quality of Life* kurang sebanyak 14,8%. Hasil analisis uji statistik diperoleh nilai X^2 hitung (4,352) > X^2 tabel (3,841). Hal ini berarti ada hubungan antara dukungan informasional dengan *Quality of Life*.

Analisis Hubungan Dukungan Instrumental Dengan *Quality of Life*

Hubungan Dukungan Instrumental dengan Qualuty oaf Life terdapat 6 pasien yang mendapat dukungan instrumental kurang dan memiliki *Quality of Life* kurang sebanyak 50,0%. Sedangkan dari 48 pasien yang mendapat dukungan instrumental cukup dan memiliki *Quality of Life* kurang sebanyak 27,1%. Hasil analisis uji statistik diperoleh nilai p (0,346) > 0,05. Hal ini berarti tidak ada hubungan antara dukungan instrumental dengan *Quality of Life*.

Tabel 2. Hubungan Dukungan Informasional Dengan Quality of Life Pasien

Dukungan Informasional	*Quality of Life*				Jumlah	P Value
	Kurang		Baik			
	n	Persentase	n	persentase		
Kurang	12	44,4	15	55,6	27	
Cukup	4	14,8	23	85,2	27	(4,352)
Jumlah	16	29,6	38	70,4	54	

Sumber: Data Primer 2017

Analisis Hubungan Dukungan Emosional Dengan *Quality of Life* Pasien

Terdapat 16 pasien yang mendapat dukungan emosional kurang dan memiliki *Quality of Life* kurang sebanyak 25%. Sedangkan dari 38 pasien yang mendapat dukungan emosional cukup dan memiliki *Quality of Life* kurang sebanyak 31,6%. Hasil analisis uji statistik diperoleh nilai p (0,751) > 0,05. Hal ini berarti tidak ada hubungan antara dukungan emosional dengan *Quality of Life*.

Analisis Hubungan Dukungan Penghargaan Dengan *Quality of Life*

33 pasien yang mendapat dukungan penghargaan kurang dan memiliki *Quality of Life* kurang sebanyak 42,4%. Sedangkan dari 21 pasien yang mendapat dukungan penghargaan cukup dan memiliki *Quality of Life* kurang sebanyak 9,5%. Hasil analisis uji statistik diperoleh nilai x^2 hitung (5,178) > X^2 tabel (3,841). Hal ini berarti ada hubungan antara dukungan penghargaan dengan *Quality of Life*.

Tabel 2. Hubungan Dukungan Emosional Dengan Quality of Life Pasien

Dukungan Emosional	*Quality of Life*				Jumlah	P Value
	Kurang		Baik			
	n	Persentase	n	persentase		
Kurang	4	25,0	12	75,0	16	
Cukup	12	31,6	26	68,4	38	(0,751)
Jumlah	16	29,6	38	70,4	54	

Sumber: Data Primer 2017

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Tabel 3. Hubungan Dukungan Instrumental Dengan Quality of Life Pasien

Dukungan Instrumental	*Quality of Life*				Jumlah	P Value
	Kurang		Baik			
	n	persentase	n	persentase		
Kurang	3	50,0	3	50,0	6	
Cukup	13	27,1	35	72,9	48	(0,346)
Jumlah	16	29,6	38	70,4	54	

Sumber: Data Primer 2017

Tabel 3. Hubungan Dukungan Penghargaan Dengan Quality of Life Pasien

Dukungan Penghargaan	*Quality Of Life*				Jumlah	P Value
	Kurang		Baik			
	n	persentase	n	persentase		
Kurang	14	42,4	19	57,6	33	
Cukup	2	9,5	19	90,5	21	(5,178)
Jumlah	16	29,6	38	70,4	54	

Sumber: Data Primer 2017

PEMBAHASAN

Dukungan Informasional

Dukungan informasional merupakan dukungan yang didapatkan oleh responden berupa pemberian informasi mengenai pengobatan alternatif serta saran dalam meningkatkan kesehatan pasien. Dalam dukungan ini tidak banyak yang disampaikan keluarga sehubungan dengan penyakit yang diderita pasien yang bersangkutan. Terkhusus kepada pasien stroke banyak keluarga yang tidak menyampaikan tentang sakitnya ini karena keluarga takut apabila pasien terlalu memikirkan penyakitnya. Penyampaian informasi dilakukan pada saat pasien berada di rumah sakit. Dari hasil wawancara yang dilakukan peneliti, ada beberapa respon yang muncul ketika keluarga memberitahukan kepada pasien mengenai penyakitnya yaitu kaget, diam saja, pasrah, dan ada pula yang mengatakan bahwa sakit sudah kehendak Allah sehingga harus diterima dengan ikhlas.

Berdasarkan keterangan diatas responden yang mendapat dukungan informasional kurang dan memiliki *Quality of Life* baik, hal ini dapat terjadi karena responden sebagian besar sudah berusia lanjut mengalami penurunan panca indera terutama pendengaran, penglihatan dan daya ingat sehingga kurang dapat menerima informasi yang maksimal dari keluarga, dukungan informasional juga mempengaruhi domain lingkungan seperti tempat tinggal yang sehat, serta kemudahan untuk mendapatkan pelayanan kesehatan.

Berdasarkan keterangan diatas responden yang mendapat dukungan informasional cukup dan memiliki *Quality of Life* kurang, hal ini dapat terjadi karena responden sebagian besar sudah berusia lanjut sementara dukungan ini juga mempengaruhi domain sosial. Dari hasil wawancara didapatkan banyaknya responden yang menurun pada domain sosial terutama pada hubungan pribadi dengan alasan mereka sudah tua.

Hasil penelitian ini sejalan dengan penelitian yang dilakukan oleh (Yuliyanti, 2015) yang menyatakan bahwa keluarga berfungsi sebagai disseminator tentang dunia, berupa pemberian petunjuk, nasehat, saran, gagasan ataupun peluang.

Dukungan Emosional

Dukungan emosional merupakan kepedulian atau perhatian keluarga terhadap pasien. Dukungan emosional sebagai tempat

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keluarga yang aman dan damai untuk istirahat dan pemulihan serta membantu penguasaan terhadap emosi. Berdasarkan hasil wawancara yang diperoleh dari pasien aspek-aspek dari dukungan emosional yang diberikan oleh keluarga adalah dengan mendengarkan keluhan dari pasien serta perhatian.

Berdasarkan keterangan diatas responden yang mendapat dukungan emosional kurang dan memiliki *Quality of Life* baik, hal ini dapat terjadi karena dukungan ini mempengaruhi domain psikologi. Berdsarkan hasil wawancara diperoleh responden dapat menerima penampilan diri dan puas terhadap kesehatannya.

Berdasarkan keterangan diatas responden yang mendapat dukungan emosional cukup dan memiliki *Quality of Life* kurang, hal ini dapat terjadi karena ada beberapa responden yang tidak didampingi oleh keluarganya sehingga responden masih mengalami perasaan sedih dan kecewa.

Berdasarkan pernyataan (Kuntjoro, 2005) dalam (Yulikasari, 2015) yang menyatakan bahwa kualitas hidup di pengaruhi oleh beberapa faktor yang menyebabkan seseorang tetap bisa berguna, yaitu kemampuan menyesuaikan diri, menerima segala perubahan dan kemunduran yang dialami serta adanya perlakuan yang wajar dari lingkungan.

Dukungan Instrumental

Dukungan instrumental merupakan sumber pertolongan praktis dan konkrit, diantaranya kesehatan penderita dalam hal kebutuhan makan dan minum, istirahat, serta terhindarnya penderita dari kelelahan. Dukungan instrumental yang didapatkan pasien berupa bantuan yang diberikan secara langsung, bersifat fasilitas atau materi seperti menyediakan kebutuhan sandang dan pangan, uang, membantu melakukan aktivitas yang tidak bisa dilakukan oleh dengan sendiri, serta membawa ke fasilitas kesehatan.

Berdasarkan keterangan diatas responden yang mendapat dukungan instrumental kurang dan memiliki *Quality of Life* baik, hal ini dapat terjadi karena dalam masalah pembiayaan responden sangat terbantu dengan adanya program pemerintah yaitu BPJS yang memudahkan responden secara rutin datang kontrol di rumah sakit.

Berdasarkan keterangan diatas responden yang mendapat dukungan instrumental cukup dan memiliki *Quality of Life* kurang, hal ini dapat terjadi karena dukungan ini banyak berpengaruh pada domain fisik. Dari hasil penelitian didapatkan responden mengeluhkan rasa nyeri dan banyak membutuhkan terapi.

Dukungan Penghargaan

Dukungan penghargaan merupakan dukungan yang meliputi pemberian penghargaan positif pada individu seperti memberikan dorongan, motivasi, dan penguatan kepada penderita. Dukungan penghargaan merupakan dukungan yang jarang diberikan oleh keluarga kepada penderita. hal ini disebabkan karena keluarga merasa tidak terbiasa dengan hal tersebut. Dukungan penghargaan yang sering didapatkan oleh pasien adalah keluarga selalu mengikutsertakan pasien dalam hal kepatuhan berobat.

Berdasarkan keterangan diatas responden yang mendapat dukungan penghargaan kurang dan memiliki *Quality of Life* baik, hal ini dapat terjadi karena responden mampu menerima keadaannya dan semangat dalam menjalankan pengobatan.

Berdasarkan keterangan diatas responden yang mendapat dukungan penghargaan cukup dan memiliki *Quality of Life* kurang, hal ini dapat terjadi karena responden yang sudah lanjut usia mengalami penurunan konsentrasi dan merasa sudah tidak teralu menikmati hidupnya dengan adanya sakit yang diderita.

KESIMPULAN DAN SARAN

Berdasarkan hasil penelitian yang telah dilaksanakan dapat disimpulkan bahwa dukungan informasional dan dukungan penghargaan berhubungan dengan *Qualityof Life* sedangkan dukungan emosional dan dukungan instrumental tidak berhubungan dengan *Quality of Life.*

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Relationship Strategy Family Coping With Quality Of Life In Elderly Post Stroke

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ABSTRACT

Background: Stroke is the highest cause of death in urban areas, one of the regions in Indonesia with stroke exceeds the national rate is the city of Pontianak.
Purpose : This study aims to determine the relationship of family coping strategies to the quality of life of elderly post-stroke in the city of Pontianak.
Methods : Analytical research design correlation with cross sectional approach. sampling in total sampling with respondents amounted to 58 respondents. The sample of this study was post-stroke elderly and family members as caregiver or primary outpatient who treated elderly with post stroke.
Result : The results of multiple linear regression analysis or anova test (f test) with p value = 0.001 (<0.05) indicating that there is a significant relationship between social support, reframing, seeking and receiving, passive income and income with the quality of life of the elderly post stroke.
Conclusion : Social support is a dominant element of coping strategy. The role of community nurses is needed to support family caregivers in providing social support to post-stroke elderly.

Keywords : Coping strategies, Stroke, WHOQOL-Bref

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BACKGROUND

Vulnerability is a weakness to health problems (Shi & Steven, 2010, Allender, 2014). Vulnerable populations are in a group of adverse health risks, susceptibility is associated with an increased risk of morbidity and mortality. Vulnerable characteristics are characteristic of populations at risk of declining health status both physically, psychologically and socioeconomically (AJMC, 2006).

Stroke is one of the diseases suffered by many elderly, currently stroke is one of the many diseases found mainly at the age of 45 years and over (Riskesdas, 2007). Elderly with a stroke in rehabilitation or continuing care at home or community is highly dependent on family members, the family as a cargiver should have both physical and emotional resilience in carrying out rehabilitation. Chaiyawat (2012) stated the initial effectiveness of home rehabilitation programs during the first 6 months post stroke period leads to improvements and functions that will reduce disability and improve quality of life.

The prevalence of national stroke is 0.8% of the total population of Indonesia. This figure has not been seen from other variables such as regional type, if seen from the spread based on the type of regional prevalence of stroke nationally in urban areas is 0.9% and in rural 0.78% of the total population. One area in Indonesia with stroke exceeds the national rate of Pontianak with a prevalence of 1.4%. This prevalence exceeds the National prevalence rate of 0.8%. (Ministry of Health, 2007).

The task of treating patients Stroke in a long time will increase the burden experienced by caregiver family. This condition is exacerbated by a lack of caregiver knowledge in treating patients at home. The burden experienced by caregivers occurs due to several reasons such as feeling the task of caring for patients as a difficult task, unclear about the treatment of stroke patients, barriers in social relations during caring for patients and the feeling that patients should be helped maximally in self-care. Caregiver plays an important role in post-stroke rehabilitation of patients especially when undergoing rehabilitation at home. Darlington et al, (2007) in his research says that coping is a very powerful factor that affects the quality of life (QOL) of post-stroke patients. Given the importance of caregiver coping in post-stroke rehabilitation, the patient's output is strongly influenced by caregiver coping strategies.

Coping Family (F-Cope) strategy according to McCubbin (1991) in Friedman (2010) is divided internally and externally, internal coping such as family coping pattern, family resource derived from family resources consisting of confidence in problem solving (confidence in problem solving), arranging family problems (reframing family problems), and family passivity or inactive or passive family behavior. Koping consists of problem-solving efforts faced by individuals with demands that are highly relevant to well-being, but burdensome to one's source (Lazarus, Averill, & Opton, 1974) in Friedman (2010). The gap between several facts about stroke such as increased prevalence of cases, the biggest cause of death, inadequate rehabilitation of in-house patients where this is influenced by coping and family coping strategies as caregivers who provide home care. For that family as caregiver need to maintain koping and family coping strategies to improve the quality of life of elderly, especially elderly with post stroke.

OBJECTIVE

This study aims to determine the relationship of family coping strategies to the quality of life of elderly post-stroke in the city of Pontianak.

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METHODS

The design of this research is descriptive correlation with cross sectional approach method (point time approach). The measurement of this study measures the variables of family coping strategies including social support, reframing, searching and receiving efforts, passive acceptance and income confounding variables with the quality of life of elderly post-stroke patients at the same time.

The population in this study were all post-stroke elderly people aged 60 years or older and family cargiver as main offender who live in Pontianak city area. Sample in this research is all elderly stroke post-care hospital that aged 60 years or more residing in Pontianak city area, the amount of sample in this research as much 58 responder. Sampling method used in this research is total sampling technique, that is sample determination technique by taking all member of population as respondent or sample.

RESULTS

Table 1
The relationship between family coping strategies and the quality of life (QOL) of post-stroke elderly people in Pontianak (n = 58)

Independent Variable	Dependent Variable	r Value	*P value*
Family coping strategy	Quality of Life	0,293	0,026
Social support	Quality of Life	0,376	0,004
Reframing	Quality of Life	0,252	0,056
Spiritual support	Quality of Life	-0,300	0,022
Family businesses seek and receive help	Quality of Life	0,165	0,216
Passive *appraiasal*	Quality of Life	-0,217	0,102

Pearson correlation test result (p value ≤0,05) which indicate that family coping strategy significantly correlated with quality of life of elderly post-stroke.

The analysis of correlation between social support variable with quality of life of elderly post stroke with Pearson correlation test resulted in probability value 0,004 (p value ≤ 0,05) indicating that family social support significantly correlated with quality of life of elderly post stroke.

Analysis of the relationship between reframing variables and the quality of life of elderly post-stroke. The Pearson correlation test yielded a probability value of 0.056 (p value ≥ 0.05) indicating that reframing did not significantly correlate with post-stroke survival elderly.

The analysis of the relationship between the variables of family effort seeking and receiving help shows that spiritual support is not significantly related to the quality of life of elderly post-stroke, while passive acceptance is not significantly associated with post-stroke survival of elderly.

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Table 2
Late Linear Regression Model Double relationship of family coping strategy with post-stroke life quality of elderly in Pontianak (n = 58)

No	Model	Koefisien B	*p value*	*R square* (R^2)
1.	Constants	13,199	0,549	
2.	Social support	1,013	0,001	0,312
3.	Reframing	0,507	0,14	
4.	Efforts to find and receive help	0,827	0,121	
5.	Passive acceptance	0,258	0,481	
6.	Family income	-1.6E,006	0,088	

The final model shows that the independent variables that enter the linear regression model are social support, reframing, effort seeking and receiving passive help and acceptance as well as the confounding variable that is family income. R Square value shows the value of 0.312 means that the regression model obtained can explain 31.2% variation of the dependent variable quality of life of the elderly. In the table ANOVA F test results show that the value of p = 0.001 means at alpha 5% can state that the regression model fit (fit) with existing data. Dependent and independent variables can be used to predict the elderly's quality of life variables. Based on the value of coefficient B in table 2 it can be determined multiple linear regression model as follows:

$Y=13,199+1,013X_1+0,507X_2+0,827X_3+0,258X_4-0,0000016X_5$

Kualitas Hidup Lansia = 13,199 +1,013 Dukungan Sosial + 0,507 Reframing + 0,827 Usaha mencari dan menerima pertolongan + 0,258 Penerimaan pasif–0,0000016 Pendapatan keluarga.

The most influential variable in this research is social support variable, because the value of p = 0.001 with the largest value of B coefficient is 1.013, where every increase of 1 score of social support value, then the elderly quality of life value will increase by 1.013 where the relationship of social support variable with the quality of life together with other variables produce the number 1,013 ie, reframing variables, effort seeking and receiving help, passive acceptance and family income

DISCUSSION

Results Analysis on quality of life of post-stroke elderly in Pontianak city showed that mean of quality of life of post-stroke elderly in town of Pontianak is equal to 76,29 (SD 5,651), result of mean interval estimate of quality of life quality of post-stroke elderly in population Pontianak is between 74.81 to 77.78. The WHOQOL-BREF questionnaire is divided into 4 domains: physical domain, psychology, social relations, and environment. Conversion results from 4 domain average quality of life of elderly post stroke for physical domain 46,41 (SD 9,19).

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The mean comparison of quality of life of Chiu et al (2006) study conducted in Taiwan using WHOQOL-BREF instrument in acute stroke patients with n = 199 mean age = 72 average physical health 15.1 (SD 2.7), psychology 13, 9 (SD 2.5), average of social relationship 14,2 (SD 19,6), and environment 13,7 (SD 2,1). This shows that the average quality of life of post-stroke elderly people in Pontianak is still above the average quality of life of acute stroke population in Taiwan. Based on the analysis of the researchers, this difference may be due to the age of respondents in Taiwan average 72 years and this research is done in acute stroke, and ethnicity or social culture factor also can influence health status where pontianak city consists of various tribes and culture. Ethnic factors play an important role in the maintenance of family health (Stuart and Laraia, 2005).

Edwards and O'connell's study (2003) was performed on chronic stroke in Australia using WHOQOL-BREF instrument with n = 74 mean age = 58.35 average physical health 60.5 (SD 21.2), psychology 59.8 (SD 21,5), average social relation 62.1 (SD 25,4), and environment 67,9 (SD 19,1). This shows that the average quality of stroke chronicles higher than the average post-stroke elderly in the city of Pontianak. This difference is due to the research of o'connel performed on chronic strokes and performed in developed countries so that resources and care facilities for stroke patients are different, and in general post-chronic stroke has been dating and have a more effective coping.

Differences between caregiver caring for post-stroke patients between 1 month and 6 months where coping ability (cargiver coping ability) over 6 months is more effective which can affect quality of life (Puymbroeck, 2005). Chaiyawat (2012) stated the initial effectiveness of home rehabilitation programs during the first 6 months post stroke period leads to improvements and functions that will reduce disability and improve quality of life.

This quality of life evaluation instrument has been applied internationally and crossculturally and has tested its validity and reliability. Jennifer et.al (2009) in her study stated that the strongest predictors of stroke patients were their initial perception of HRQOL and the effect of caregiver depression during post-stroke rehabilitation that may affect the quality of life in stroke patients. Sutikno (2011) states that quality elderly life is functional condition of elderly at optimal condition, so that they can enjoy their old age with full meaning, happy and useful.

The family relationship with the highest elderly was 79.3% for children, this was in agreement with his research Wu, et al, (2009) which stated that after post hospitalization 85-90% of stroke patients treated by family members at home, including about 10-15% treated by nurses who work at home. The family continues to take responsibility for stroke patients. Kaakinen et al. (2010) in Allender (2014) also defines families as two or more individuals dependent on one another in emotional, physical, and economic support. His research, Saban and Hogan (2012), which states that cargivers who have a family relationship and female sex are more caring for their loved stroke patients and more quickly adapt to changes that occur and further improve the effectiveness in providing treatment for stroke patients.

Confounding income variable when tested model in multivariate, giving influence to other independent variable more than 10%. From the meaning of the coefficient beta states that Any increase of 1 rupiah in family income, then the elderly quality of life will decrease by 0,0000016 after controlled social support, reframing, searching and receiving passive help and acceptance.

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The results are inversely proportional to the theory that income or economic factors affect quality of life. Parker (2012) states that resources in this regard are the costs required for checks during rehabilitation to improve the quality of life of clients post-stroke. (Flores & Tomany-Korman, 2008; Hausmann, Jeong, Bost, & Ibrahim, 2008; Allender, 2014) access of the poor to health services becomes a gap to obtain quality services.
(Stuart and Laraia, 2005) argue that economic factors are a crucial risk in seeking help in using in-house facilities, with low socioeconomic families experiencing difficulties in using health facilities such as money, goods or services that can be purchased. The higher the available resources, the family coping strategy will be stronger.Francisco (2009) states that physical and psychosocial well-being is influenced by their clients and caregivers.

Based on the analysis researchers can be assumed that the relationship of blood or family has a high emotional relationship and have a commitment between caregiver with elderly post stroke so it will cause a great sense of responsibility. Revenue in theory greatly affects the health status where clients can access health facilities.

The result of bivariate test shows that family coping strategy in Pontianak is significantly related to the quality of life of elderly post stroke. Family coping strategies are divided into 5 subvariables (ie McCubbin, Olson & Larsen, 1991; Walsh, 2998; Friedman 2010); social support, reframing, spiritual support, seeking and receiving help, and passive acceptance. Coping strategies are done effectively stressor no longer cause pressure psychologically, or physically but will be a stimulant that spurs achievement and physical and mental condition better.

Based on respondents' answers that most respondents are trying to try to solve the problem as soon as possible. Darlington (2007) in his research stated that coping strategy is the most important determinant affecting quality of life, and he also states that coping has a big effect after 5 months of discharge.

Social support resulted in a p value of 0.004 from bivariate test results indicating that soial support has a very significant relationship with the quality of life of elderly post-stroke. The end result of the multiple linear regression model states that every increase of 1 score of social support value then the quality of life number will increase 1.013 which means that the relationship of social support variable with quality of life together with reframing variables of effort seeking and receiving help, passive acceptance and family income .

Research conducted by Grant (2007) which states that social support and emotional focus is a component that contributes to cargiver self-adjustment in problem solving.
Families utilizing social support systems in family social networks are a very important external family coping strategy that functions as a social, psychological, and behavioral function. Dayapoglu (2010) also stated that Quality of life score has positive impact and has significant relation with social support from family scale and aspect of life quality variable such as functional status, welfare, perception to general health and general life quality.

Liu (2005) in his research stated that social support including family support is an effective factor in solving problems with chronic diseases that can improve health status in improving quality of life. This is supported by respondents' answers mostly answered that they shared difficulties with their immediate family, asked for advice, discussed problems with their neighbors and asked the close family about how they felt about the problem, so that the elderly received massive social support from the family that could improve quality of life.

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The reframing variable with quality yielded a value (p value> 0.05) indicating that reframing did not significantly correlate with post-stroke survival of the elderly (Clarke et al, 2010) in his research suggesting that short-runs to risk managment have implications for well being (welfare) of individuals and is recommended for comprehensive assessment so that they know what they need.

Reframing is especially necessary in times of cryicitis or in acute stroke, which will improve the effectiveness of solving health problems especially in post-stroke elderly people who are attacked between 3-6 months. If this can be done then the quality of life of elderly post-stroke will increase. This is supported by the responses of respondents who mostly stated that they have the strength or ability to solve the problem.

Results Analysis of spiritual support with quality of life in the city of Pontianak (p value <0.05) indicates that spiritual support is significantly related to the quality of life of elderly post-stroke. Spiritual trust is the individual and family religion is the core of all koping and family adaptation. Confidence is a major force in increasing family resilience in family coping strategies (McCubbin, Olson & Larsen, 1991; Walsh, 2998; Friedman 2010).

Based on the above results, the spiritual support provided by the family in this case caregiver will increase the sense of comfort and safe in the elderly post stroke especially in the acute phase, because it will improve the psychosocial well being which will ultimately improve the quality of life of elderly post-stroke. This is supported by respondents' answers, most of whom claimed they were following religious activities in the mosque / church, asking for advice from religious leaders and believing in God's greatness.

Based on the calculation in modeling the change of coefficient value B on each independent variable of effort seek and receive help turns out there is value that change more than 10%, that is equal to (25,41%), it can be concluded that business variable seek and accept has a meaningful relationship with the quality of life. From the results of coefficient B on this variable states that every 1 digit increase in business variables seek and receive help then the quality of life will rise by 0.827

CONCLUSION

Based on the results of research on the relationship of family coping strategies to the quality of life of post-stroke elderly in the city of Pontianak, obtained the following conclusions:

1. Characteristics of post-stroke elderly in the city of Pontianak on average 65 years old, stroke less than 6 months, most categories of male sex, and low-educated. The characteristics of the families caring for the post-stroke elderly in Pontainak are mostly female and have a family relationship as and the mean age after 33 years
2. Quality of life post-stroke elderly in the city of Pontianak an average of 76.29. Conversion results from 4 domains mean the elderly's quality of life for social relations domains had the highest mean value.
3. Family coping strategies have a significant relationship with the quality of life of elderly post stroke in general in the city of Pontianak.
4. Social support given is to tell the family difficulty with close family, friends or neighbors.
5. Reframing given to elderly post-stroke families is that they have the ability to solve problems, the family has the power to solve problems, and show others that the family is strong and steadfast in the face of problems.

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6. Spiritual support is given to follow the study activity in the mosque or other places of worship, participate in religious activities, seek advice from religious leaders, and believe in the greatness of God.
7. Attempt to seek and receive help given to seek advice from other families who have similar problems, ask for help from puskesmas, ask for explanations and advice from doctors, ask for help and consult the experts.
8. Family income in the city of Pontianak is the only confounding variable that affects independent and dependent variables.

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Social support, functional outcome and quality of life among stroke survivors in an urban area

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Abstract

Sophisticated medical technologies can prolong a stroke patient's life but not always their quality of life (QoL) due to poor functional outcomes. Social support can theoretically assist a patient's adaptation to life after stroke and improve their QoL, but existing findings are inconclusive. This inconclusiveness is especially found in large cities where family and social bonding can be scarce. We conducted a hospital-based, cross-sectional study among 358 stroke patients to identify the effects of social support and functional outcome on QoL and its domains. The study took place in Bangkok, Thailand between July and December 2016. Data were collected by personal interview using a structured questionnaire that included the Short-Form WHO Quality of Life Instrument (WHOQOL-BREF) and by review of medical records. A hierarchical linear regression method was used to analyze data. The mean age of stroke respondents was 66.0 years (*SD* 13.5 years), and half were male. The mean total QoL score for patients was 68.6 (*SD* 15.2). Hierarchical multiple regression analysis found emotional support significantly impacted QoL in every domain ($ps < .05$) when all included variables were controlled for. To improve the quality of life among stroke survivors, health personnel and family members should provide not only physical assistance but also psychological support.

Stroke is the leading cause of death and disability in the world and a major health-related economic burden (Di Carlo, 2009; Feigin, et al., 2015a; Krishnamurthi et al., 2013). The stroke burden is continuously increasing due to the changes in demographics and modifiable risk factors (Feigin et al., 2016). In the last two decades, although the overall burden of stroke has declined in high-income countries, it has increased in low- and middle-income countries, including Thailand (Feigin, Mensah, Norrving, Murray, & Roth, 2015b).

To mitigate the severity of strokes, advanced medical technologies and intervention for stroke treatment have been developed. It was reported that advanced management for strokes can reduce the death rate after stroke by about 20% (Davis, Lees, & Donnan, 2006; Jauch et al., 2013); however, despite this development, several forms of neurological impairment remain present in stroke survivors (Chou, 2015). These impairments cause physical disabilities and dysfunction in performing both basic daily activities as well as community-based activities. This impacts the quality of life (QoL) of both patients and their family members (Chou, 2015; Kwok et al., 2006; Rachpukdee, Howteerakul, Suwannapong, & Tang-aroonsin, 2013). Some affected individuals have even stated that their QoL after a stroke was worse than death (Sturm et al., 2004). However the sequelae of stroke vary greatly depending upon the type of stroke, its size and the location of the brain affected, as well as the amount of collateral blood flow (Caplan, 2009).

A psychometric assessment of QoL after stroke can provide a holistic picture of stroke burden. Recently, assessment of QoL among patients with stroke has received increased global attention (Chou, 2015; Rachpukdee et al., 2013). It is widely recognized that the level of functional outcomes among stroke survivors, such as movement dysfunction or disability, can cause stress and dissatisfaction in life (Chou, 2015; Rachpukdee et al., 2013), but that social support may mitigate the effect of these functional outcomes (Kim, Warren, Madill, & Hadley, 1999; Mayo et al., 2015). Social support provided by people within an individual's social network is a crucial factor in helping individuals adapt to life after a chronic illness such as stroke (Helgeson, 2003; Kruithof, van Mierlo, Visser-Meily, van Heugten, & Post, 2013).

Although the relationships between the QoL, functional outcome and social support of stroke survivors have been previously studied in Thailand (Rachpukdee et al., 2013; Singhpoo et al., 2012), the specific effects of functional outcome and the social support dimension on each domain of QoL among stroke survivors remain unclear. Moreover, advanced medical management for stroke seems to give a better treatment outcome, but not a better QoL. Stroke patients

have a higher chance of surviving, but most of them live with neurological deficits (Davis et al., 2006; Jauch et al., 2013). In large cities, although people can more conveniently access advanced tertiary hospitals, the social and family functions may be poorer. Therefore, it is necessary to quantify the QoL of stroke survivors living in a large city in Thailand and accessing an advanced tertiary hospital. Bangkok is the capital city of Thailand. Gaining an understanding of the effect of social support on QoL may provide crucial information for designing specific interventions to improve the well-being of stroke patients. Therefore, this study aimed to assess QoL and its specific domains, and identify the effects of functional outcome and social support on overall QoL and its domains.

The Short-Form WHO Quality of Life Instrument (WHOQOL-BREF) is a generic measurement tool covering physical, psychological, social and environmental domains, and has good psychometric properties (World Health Organization, 1996). Using the WHOQOL-BREF to measure QoL among stroke patients allows the results to be compared with results from studies of the general population and studies of other diseases. This is unlike the stroke-specific, health-related QoL questionnaire that can provide insight into QoL in stroke patients only.

Methods

This cross-sectional study included consecutive patients hospitalized in the stroke unit an advanced tertiary hospital in Bangkok and those who visited the outpatient neurological clinics at the same hospital between July and December 2016. The inclusion criteria were: (1) aged 18 years old and above; (2) having a diagnosis of first-ever ischemic stroke or intracerebral hemorrhage, confirmed by brain imaging consistent with the clinical presentation of stroke; (3) capable of cognitive communication; and (4) a willingness to participate in the study. During the enrollment period, 434 first-ever stroke cases visited the study setting, and 76 were excluded due to: (1) suffering from comorbidities related to QoL such as cancers, heart failure, lung diseases and renal failure (18 cases); (2) not coming to the clinic during the data collection period (25 cases); and (3) patients discontinuing the interview (33 cases).

A total of 358 stroke patients agreed to participate in the study and signed informed consent forms (82.5% response rate). Data were collected by personal interviewing using a structured questionnaire. The interviews took place in a private room to maintain confidentiality. The data collection was done by the researcher and research assistants who are health professionals. The research assistants participated in a one-day training session on data-collection procedures and using the questionnaire. Clinical data were retrieved from the patients' medical records. All participants acknowledged that their responses would be kept confidential.

This study was approved by the Committee on Human Rights Related to Research Involving Human Subjects Faculty of Medicine Ramathibodi Hospital, Mahidol University (No. MURA2015/759/S2).

Measures

Quality of life (QoL). We used the validated Thai-language version of the WHOQOL-BREF to assess the QoL of stroke patients. The WHOQOL-BREF is the 26-item shortened version of the WHOQOL instrument. Of these 26 items, the first 2 are generic and do not get included in any analysis. A five-scale response covers four domains: physical health (seven items), psychological health (six items), social relations (three items), and environment (eight items). The total score of the items in each domain is transformed to a 0–100 score (World Health Organization, 1996). The total scores reflect the level of QoL; lower scores indicate a lower QoL while higher scores indicate a higher QoL. The reliability of the structured questionnaires was satisfactory ($r_\alpha > .70$). Cronbach's alpha was .930 for the overall WHOQOL-BREF, while for the physical domain it was .835; psychological domain, .825; social relations, .711; and environment, .702.

Individual factors. Data were provided for sex, age (years), marital status (married and living with their spouse, married but living apart, single, divorced, widowed) and working status at assessment date (currently working, not working). The highest formal education attainment of each participant was classified into five scores: no education (0), primary school (1), secondary school/vocational certificate (2), bachelor's degree/high vocational certificate (3) and higher than bachelor's degree (4). Family income was classified as insufficient (0), sufficient (1) and sufficient with savings (2).

The duration of stroke was measured from the time of the first stroke diagnosis until the survey date and then categorized into five categories: <1 month (1), 1–3 months (2), 4–6 months (3), 7–12 months (4), and >12 months (5). The severity of stroke for each patient was assessed by neurologists at the first admission using the National Institute Health Stroke Scale (NIHSS; (Josephson, Hills, & Johnston, 2006). The Charlson Comorbidity Index (CCI) was used to classify comorbidities of the stroke survivors into two categories: low comorbidity 0 or 1, and high ≥2 (Goldstein, Samsa, Matchar, & Horner, 2004).

Functional outcome

Functional outcome refers to functional ability in activities of daily living (ADL) of post-stroke patients, measured using the Barthel Index (BI; Mahoney & Barthel, 1965). BI scores range from zero (a dependent state) to 100 (a fully independent state), so higher scores indicate a better performance in ADL. BI was classified into five groups, 0–20 as totally dependent, 21–45 as severely dependent, 46–70 as moderately dependent, 71–90 as slightly dependent, and 91–100 scores as independent (Balu, 2009). Cronbach's alpha for BI was .896.

Social support

Social support in this study refers to the emotional, informational, functional, and financial support that stroke patients received from family members, friends or health personnel (Gurcay, Bal, & Cakci, 2009; Helgeson, 2003; Jaracz & Kozubski, 2003; Rachpukdee et al., 2013). The 16-item social support questionnaire was developed in accordance with House's concept to assess the help that stroke patients receive from family members, friends, and other related individuals (House, 1981). It is a 5-point Likert-type scale questionnaire including four dimensions of emotional support (five items), informational support (four items), functional support (four items) and financial support (three items). Scores 1 to 5 were assigned to responses *none of the time, a little of the time, some of the time, most of the time* and *all of the time*. Subscale scores summed the responses checked for the relevant items, with higher scores indicating higher support. The total social support scores ranged from 16 to 80. The final version of the social support questionnaire was piloted for the reliability analysis among 30 stroke patients at the inpatient and outpatient clinics of the study site, but who were not included in this study. The coefficient of Cronbach's alpha for the overall social support was .933; emotional support, .913; informational support, .778;. functional support,

Table 1. Individual characteristics of stroke survivors (n = 358)

Characteristics	
Age, years, mean ± *SD* (range)	66.0 ± 13.5 (22–93)
Age ≥65 years, *n* (%)	202 (56.4)
Male sex, *n* (%)	179 (50.0)
Education attainment, *n* (%)	
No education	16 (4.5)
Primary school	170 (47.5)
Secondary school/vocational certificate	87 (24.3)
Bachelor's degree	66 (18.4)
Higher than bachelor's degree	19 (5.3)
Marital status, *n* (%)	
Married and living with a spouse	227 (63.4)
Married but living apart/single/widowed/divorced	131 (36.6)
Occupation, *n* (%)	
Currently working	245 (68.4)
Not working	113 (31.6)
Monthly income, baht[§], median (IQR)	30,000 (38,000)
Sufficiency of income, *n* (%)	
Insufficient	86 (24.0)
Sufficient	92 (25.7)
Sufficient with savings	180 (50.3)
Type of stroke, *n* (%)	
Ischemic stroke	291 (81.3)
Intracerebral hemorrhage	67 (18.7)
Severity of stroke at admission	
Normal (NIHSS 0)	23 (6.4)
Minor (NIHSS 1–4)	194 (54.2)
Moderate (NIHSS 5–15)	133 (37.2)
Moderate to severe (NIHSS 16–20)	5 (1.4)
Severe (NIHSS 21–42)	3 (0.8)
Median (IQR), (range)	4 (4), (0–28)
Functional outcome, *n* (%)	
Independent (BI 91–100)	109 (30.4)
Slightly dependent (BI 71–90)	206 (57.5)
Moderately dependent (BI 46–70)	24 (6.7)
Severely dependent (BI 21–45)	15 (4.2)
Totally dependent (BI 0–20)	4 (1.1)
Barthel Index (BI), mean ± *SD* (range)	92.2 ± 17.6 (10–100)
Comorbidity, *n* (%)[x]	
None	31 (8.7)
Hypertension	263 (73.5)
Dyslipidemia	193 (53.9)
Diabetes mellitus	118 (33.0)
Cardiovascular diseases	102 (28.5)
Renal failure	34 (9.5)
Cancers	13 (3.6)
Lung disease	6 (1.7)

Note: [§] 1 USD = 32.96 THB, [x]multiple responses.

.792; and financial support, .805. Each domain of social support was classified into three levels using percentiles: below the 25th percentile is low, between the 25th and 75th percentiles is moderate, and above the 75th percentile is high.

Statistical analysis

Descriptive statistics, including means, standard deviation (*SD*), frequency, percentage, and range were used to describe all study variables. Mean ± *SD* was reported for normally distributed continuous variables. Median with interquartile range (IQR) was used to describe other forms of distribution. An analysis of variance was used to compare QoL scores by categorical variables. QoL scores, age, education level, income, duration of stroke, functional outcome, and social support were treated as continuous variables and the others as dichotomous.

Five separate hierarchical multiple regression models were performed to identify the effect of independent factors on QoL. The total QoL scores of stroke patients were used in the first analysis, and each of its domain scores includes physical, psychological, social relations, and environment as dependent variables in the second to the fifth models. The following independent variables were sequentially entered in the analysis: *Block I. Individual factors* – sex, age, education level, marital status, working status, sufficient income level, duration of stroke and comorbidity; *Block II. Functional outcomes* – Barthel Index; and *Block III. Social support* – emotional support, informational support, functional support, and financial support. The level of statistical significance was set at <.05 for all analyses. Standardised regression coefficients (β) were computed. The coefficient of determinant (R^2) was calculated to determine the amount of variability explained by the model. The assumptions of multiple regression, including linearity, normality and equality of variance, were assessed through the residual scatterplots. All statistical assumptions are assumed. The normal plot of regression standardized residuals for the dependent variable indicated a relatively normal distribution. The scatterplot of residuals against predicted values showed no clear relationship between the residuals and the predicted values, consistent with the assumption of linearity, and that the variance of the residuals is the same for all predicted scores. The variation inflation factor (VIF) values of predictors of QoL domains below 10 indicated that no predictors had multicollinearity (Hair, Anderson, Tatham, & Black, 1995).

Results

A total of 358 stroke survivors completed the WHOQOL-BREF questionnaire. The mean age of the study population was 66.0 ± 13.5 years (range 22–93 years). The proportion of male and female participants was equal. Almost one half (47.5%) had only completed primary school level education. Most respondents (63.4%) were married and still living with their spouse (Table 1). At the time of the survey, 31.6% of post-stroke respondents were not able to return

Table 2. Comparison of the QoL mean scores in four domains according to individual factors

		Domains			
	Total QoL	Physical	Psychological	Social relations	Environment
Characteristics	Mean ± *SD*	Mean ± *SD*	Mean ± *SD*	Mean ± *SD*	Mean ± *SD*
Total	68.6 ± 15.2	62.9 ± 18.0	67.8 ± 17.6	72.6 ± 16.3	71.0 ± 17.8
Sex, *p* value	0.001	<.001	0.004	0.064	0.094
Male	71.2 ± 15.5	67.6 ± 15.7	70.5 ± 17.7	74.2 ± 16.9	72.6 ± 17.9
Female	66.0 ± 14.4	58.3 ± 19.1	65.1 ± 17.3	71.0 ± 15.5	69.4 ± 17.5
Marital status, *p* value	<.001	<.001	<.001	<.001	<.001
Married and living with spouse	73.0 ± 13.1	67.4 ± 15.7	72.3 ± 15.4	77.8 ± 13.6	74.4 ± 16.2
Married but living apart/single/divorced/widowed	61.0 ± 15.5	55.2 ± 19.2	60.0 ± 18.5	63.6 ± 16.8	65.2 ± 18.8
Working status, *p* value	0.001	<.001	<.001	<.001	<.001
Currently working	72.0 ± 13.3	67.5 ± 14.7	71.1 ± 16.4	75.2 ± 14.8	74.0 ± 15.9
Not working	61.3 ± 16.4	52.9 ± 20.5	60.8 ± 18.3	67.0 ± 18.0	64.4 ± 19.8
Sufficiency of income, *p* value	<.001	<.001	<.001	<.001	<.001
Insufficient	54.7 ± 12.3	55.1 ± 16.7	53.5 ± 15.8	59.6 ± 14.5	50.7 ± 12.0
Sufficient	66.1 ± 12.9	60.9 ± 16.7	66.0 ± 16.2	69.6 ± 15.4	67.7 ± 13.8
Sufficient with savings	76.5 ± 11.9	67.7 ± 17.9	75.6 ± 14.4	80.4 ± 12.8	82.4 ± 11.5
Duration of stroke, *p* value	0.196	<.001	0.042	0.339	0.322
<1 month	65.9 ± 13.4	52.4 ± 21.7	62.5 ± 17.5	74.6 ± 16.0	73.9 ± 14.6
1–3 months	72.0 ± 14.1	65.8 ± 13.4	72.1 ± 14.9	75.5 ± 17.9	74.7 ± 18.6
4–6 months	65.9 ± 18.9	62.6 ± 20.5	65.8 ± 19.9	68.2 ± 19.3	67.3 ± 22.7
7–12 months	67.3 ± 16.1	61.7 ± 17.7	67.0 ± 19.1	71.1 ± 15.5	69.5 ± 17.7
>12 months	69.9 ± 14.8	66.6 ± 15.3	69.6 ± 16.9	72.7 ± 15.6	70.5 ± 17.8

Note: p-value of analysis of variance test.

to work. Twenty-four percent of post-stroke respondents reported that their current family income was insufficient for their day-to-day lives. About four-fifths of respondents had suffered an ischemic stroke (81.3%), and one-half of respondents (51.7%) had experienced their stroke more than 12 months previously. About half had presented with a minor stroke at their first stroke admission, followed by moderate stroke (37.2%). Most respondents were slightly dependent (57.5%) and 5.3% were at a severely and totally dependent level. The common comorbidities among stroke survivor were hypertension (73.5%) followed by dyslipidemia (53.9%).

The mean scores for all QoL domains and individual factors are shown in Table 2. The lowest mean scores of QoL were revealed for the physical and psychological domains. Male respondents had significantly better physical and psychological health than females. The means of responses indicating QoL were higher in all domains among married individuals and those living with their spouse than those who were married but living apart, single, divorced or widowed. Respondents who still worked reported significantly higher scores in all QoL domains. Mean QoL scores for all domains increased with increasing levels of income sufficiency ($p < .001$). Only physical and psychological QoL domains were significantly influenced by duration of stroke.

Mean scores of total QoL by level of functional outcome were significantly different ($ps < .05$). Higher BI scores revealed high QoL in all domains. Mean QoL varied across functional outcome levels; for example, the severely dependent and totally dependent had the lowest QoL-physical scores (18.7 and 9.5, respectively; Table 3). A higher level of social support showed higher mean scores for all domains of QoL (Table 3). Higher scores of emotional support showed higher mean scores in all domains of QoL. Similarly, the higher the level of financial support patients received, the higher the mean scores of total QoL they had ($ps < .05$). Informational and functional support indicated significantly positive effects on almost every domain of QoL except physical health (Table 3).

Table 4 shows the results of the hierarchical multiple regression analyses. The analyses indicated that being currently married and living with their spouse, currently working, and having a higher level of income sufficiency were related to higher total QoL scores. After controlling for individual factors, functional outcomes and emotional support were significantly related to higher total QoL scores. The individual factors (Block I) explained 49.13% of the variance in the total QoL, functional outcomes (Block II) significantly explained 15.05% of the variance, and social support (Block III) explained another 9.51%, resulting in the whole model explaining 73.69% of the variance. Standardized regression coefficients (β) indicated that functional outcome had the highest effect on total QoL scores, followed by sufficiency of income and emotional support.

In the second hierarchical multiple regression model, male, married and living with a spouse, currently working, a higher level of income sufficiency, higher scores of functional outcome and higher emotional support showed significant relationships with higher QoL-physical scores. Functional outcome (Block II) explained 38.49% and social support (Block III) explained 2.89%

Table 3. Comparison of the QoL mean scores in four domains according to functional outcome and social support level

		Domains			
	Total QoL	Physical health	Psychological health	Social relationship	Environment health
	Mean ± *SD*	Mean ± *SD*	Mean ± *SD*	Mean ± *SD*	Mean ± *SD*
Functional outcome (BI), *p* value	<.001	<.001	<.001	<.001	<.001
Independent (BI 91–100)	75.1 ± 11.2	68.5 ± 12.9	74.7 ± 14.6	78.1 ± 14.3	77.6 ± 16.3
Slightly dependent (BI 71–90)	74.7 ± 13.0	66.6 ± 9.5	63.9 ± 14.7	66.9 ± 13.5	63.0 ± 14.4
Moderately dependent (BI 46–70)	51.5 ± 11.3	34.7 ± 12.3	50.8 ± 13.0	60.7 ± 17.4	59.7 ± 17.5
Severely dependent (BI 21–45)	45.4 ± 10.2	18.7 ± 7.2	41.1 ± 10.5	63.3 ± 18.6	58.5 ± 17.3
Totally dependent (BI 0–20)	36.9 ± 19.8	9.5 ± 4.0	20.5 ± 7.5	53.2 ± 42.2	64.2 ± 32.6
Total social support, *p* value	<.001	<.001	<.001	<.001	<.001
Low (32–55)	57.2 ± 13.2	58.4 ± 15.9	53.9 ± 15.9	60.8 ± 15.9	55.6 ± 14.9
Moderate (56–64)	71.0 ± 11.8	64.3 ± 15.8	72.2 ± 12.6	74.1 ± 12.1	73.4 ± 15.1
High (65–74)	75.4 ± 16.5	64.9 ± 22.7	73.5 ± 19.9	81.6 ± 16.8	81.7 ± 14.6
Emotional support, *p* value	<.001	<.001	<.001	<.001	<.001
Low (8–16)	56.3 ± 13.2	53.5 ± 17.6	53.5 ± 16.2	61.3 ± 15.7	57.2 ± 16.6
Moderate (17–20)	71.1 ± 11.6	64.9 ± 14.8	71.8 ± 13.0	74.6 ± 13.0	72.9 ± 14.9
High (21–23)	77.8 ± 13.7	69.9 ± 19.0	76.9 ± 16.2	81.6 ± 14.8	82.6 ± 12.8
Informational support, *p* value	<.001	0.175	<.001	<.001	<.001
Low (7–13)	61.2 ± 13.6	62.8 ± 13.3	59.2 ± 17.1	63.7 ± 16.3	59.3 ± 15.6
Moderate (14–15)	70.4 ± 13.5	65.1 ± 17.4	70.4 ± 15.1	74.1 ± 14.4	72.1 ± 16.6
High (16–20)	71.1± 16.2	61.0 ± 20.5	70.3 ± 18.7	76.3 ± 16.2	76.6 ± 16.2
Functional support, *p* value	<.001	0.827	<.001	<.001	<.001
Low (7–13)	61.7 ± 13.1	62.0 ± 13.8	58.5 ± 16.3	65.3 ± 15.2	60.9 ± 16.4
Moderate (14–16)	68.9 ± 13.2	63.6 ± 14.5	71.5 ± 13.9	70.4 ± 14.1	70.1 ± 17.4
High (17–19)	72.5 ± 15.8	63.1 ± 21.7	71.3 ± 18.3	78.2 ± 16.2	77.5 ± 15.8
Financial support, *p* value	<.001	<.001	<.001	<.001	<.001
Low (3–9)	64.8 ± 15.0	61.9 ± 17.2	63.1 ± 17.9	68.6 ± 16.1	65.6 ± 18.2
Moderate (10–11)	68.7 ± 16.5	58.2 ± 22.8	67.6 ± 18.8	74.2 ± 18.2	74.9 ± 16.3
High (12–15)	74.3 ± 12.1	68.9 ± 11.9	75.3 ± 13.0	77.4 ± 13.2	75.7 ± 16.2

Note: p-value of analysis of variance test.

of the variance in QoL-physical ($p < .05$), while the whole model explained 73.59% of the variance in QoL-physical (Table 5).

The whole model explained 66.03% of the variance in the QoL-psychological domain, 54.17% in the domain of the QoL-social relations, and 69.74% in the QoL-environment domain (Table 5). Functional outcome (Block II) significantly explained the variances in those three models. Social support (Block III) significantly explained 12.89% of the variance in the QoL-psychological domain, 7.48% in QoL-social relations domain, and 8.93% in QoL-environment domain (*p*s <.05).

Among the five hierarchical multiple regression analysis models, functional outcome provided the significant change in R^2, especially in the physical and psychological domains (38.49% and 15.85%). However, R^2 change of social support in the psychological domain provided the greatest contribution to patient's QoL variance (12.89%).

In the overall results of hierarchical multiple regression analyses (Table 5), functional outcome had the highest effect on the physical domain of QoL ($\beta = .70$, $p < .05$), followed by sufficient income level ($\beta = .23$, $p < .05$) and emotional support ($\beta = .22$, $p < .05$). The psychosocial domain of QoL was most influenced by functional outcome ($\beta = .53$, $p < .05$), followed by sufficient income level, emotional support and functional support ($\beta = 0.32$, 0.26 and 0.19 respectively with *p*s < .05). For the social relations domain, sufficient income level was the strongest predictor, followed by being married and living with their spouse, functional outcome and emotional support. Similarly, income level had the highest effect on patients' QoL in the environment domain. Moreover, emotional support, informational support and financial support significantly impacted the environmental domain of the patient's QoL (*p*s < .05). Duration of stroke showed a negative effect on the social relations and environment QoL domains. In conclusion, functional outcome and social support clearly affect a patient's QoL in all domains when all included factors are controlled (Table 5).

Discussion

QoL is a complex concept of physical, mental and social well-being, embedded in the context of culture, environment, and

Table 4. Hierarchical multiple regression analysis of factors associated with total quality of life (n = 358)

	Total QoL		
Independent variables	β	β	β
Block I. Individual factors			
Constant			
Male/female[§]	<0.01	−0.04	−0.03
Age	−0.02	0.08*	0.01
Education level (0–4)	0.02	−0.01	0.01
Married and living with spouse/other status[§]	0.30*	0.29*	0.13*
Currently working/not working[§]	0.16*	0.08*	0.10*
Sufficient income level (0–2)	0.53*	0.57*	0.41*
Duration of stroke (1–5)	0.04	−0.8	−0.04
High comorbidity (CCI≥2)/low (CCI <2)[§]	0.001	−0.01	0.01
Block II. Functional outcome			
Functional outcome (BI 0–100)		0.45*	0.48*
Block III. Social support			
Emotional support (5–25)			0.26*
Informational support (4–20)			0.06
Functional support (4–20)			0.09
Financial support (3–15)			0.06
Explained variance (R^2)	49.13%*	64.19%*	73.69%*
Change of variance (R^2 change)		15.05%*	9.51%*

Note: β = standardized regression coefficients; BI = Barthel Index; CCI = Charlson Comorbidity Index; [§]References; *p value < .05.

value systems (World Health Organization, 1996). Stroke can result in neurological impairments affecting QoL at some levels; for example, basic performance of daily or community activities (Chou, 2015; Kwok et al., 2006; Rachpukdee et al., 2013). This study revealed a good internal consistency for the overall WHOQOL-BREF (Cronbach's alpha at .930) so it can be concluded that this instrument was a suitable tool to provide reliable QoL data in this specific stroke population. This study revealed how the presence of stroke suppressed the QoL of patients as well as factors affecting QoL domains. Having a stroke lowered QoL of affected individuals in all domains, especially physical and psychological health; this matches previous findings in Thailand and other countries (Chou, 2015; Kwok et al., 2006; Lima, Santos, Sawada, & de Lima, 2014; Pan, Song, Lee, & Kwok, 2008; Rachpukdee et al., 2013; Singhpoo et al., 2012). The physical effects of stroke are obvious, but the psychological effects are not always viable. A previous cohort study indicated that prestroke hospitalization was significantly related to severe mental illness (Lilly, Culpepper, Stuart, & Steinwachs, 2017). The current study clearly demonstrated low psychological scores among patients with stroke.

The advanced tertiary hospital chosen in this study is a government hospital that takes care of patients from every health coverage level, including patients under the free universal healthcare scheme or Social Security Scheme, state enterprise employees, and those with private insurance or who were self-paying. This range meant we could describe the economic status of respondents and control its effect using hierarchical multiple regression analysis.

An understanding of the factors associated with QoL of patients after stroke is beneficial when preparing a targeted plan to improve the QoL of stroke survivors and reduce the negative consequences of stroke. In this study, the mean scores for total and specific QoL domains were increased for individuals who were married and living with their spouse; implying that stroke individuals in this study who received support from their spouse had better QoL. Moreover, married patients showed the greatest number of social relations. This study is consistent with the findings of another study among stroke survivors in Thailand that found that single or widowed stroke survivors had a 4.14 higher risk of unsatisfactory QoL compared with those who were in a couple (Rachpukdee et al., 2013). Working status was found to be a significant predictor of total QoL. This could be explained by the fact that individuals who were still able to work after stroke usually had good functioning outcome and experienced less stress. This finding confirmed the findings of a related study that found that patients who were unemployed after stroke were 10 times more likely to have an unsatisfactory QoL in every domain compared to those who were still working (Rachpukdee et al., 2013). Sufficiency of family income was a significant predictor on QoL, especially regarding the environmental domain. The higher the income patients had, the better the QoL they reported. This finding was consistent with a hospital-based study in Thailand where household incomes were significantly associated with every domain of QoL using the SF-36 measure (Singhpoo et al., 2012).

The QoL scores among stroke respondents were lower when patients had a poorer functional outcome, which is consistent with the findings from previous studies (Chou, 2015; Haacke et al., 2006; Khalid et al., 2016; Rachpukdee et al., 2013), and present functional outcome in terms of basic daily activities was found to be a predictor of QoL as a whole. This information can be used to support rehabilitation programs after stroke and to spur patients and families' efforts towards following the rehabilitation plan. With greater efforts put towards rehabilitation, individuals with stroke would have a greater opportunity to gain more fully functional abilities and this can result in a better QoL.

After controlling for individual factors and functional outcomes, the effect of social support, covering the four dimensions – emotional, information, functional, and financial support – was identified. Emotional support was found to be a significant predictor of higher total QoL scores and all its domains. This result is corroborated by a previous study that reported that emotional support influenced QoL among patients with stroke (Jaracz & Kozubski, 2003). These results show that it is particularly important that stroke victims feel supported as this appears to increase QoL. Strengthening emotional support is suggested to be one of the decisive factors in improving quality of life of stroke patients, along with an effective rehabilitation program. To be more specific, with the stressful situation due to disability, a rehabilitation program or intervention for stroke survivors, including appropriate emotional support from the patient's network, is recommended. This result confirmed the finding of a previous study (Helgeson, 2003).

Moreover, the present study revealed that functional support was significantly associated with psychological and social relations QoL domains. A previous study assessing the QoL of stroke patients using the WHOQOL-BREF questionnaire also reported that patients who had caregivers had higher scores of psychological and social relations than those without caregivers (Lima et al., 2014). Emotional and functional support were found to be the strongest predictors of psychological health in this study and should be used in promoting the recovery process and preventing

Table 5. Hierarchical multiple regression analysis of factors associated with quality of life domains (n = 358)

	QoL-Physical			QoL-Psychological			QoL-Social relations			QoL-Environment		
Independent variables	β	β	β	β	β	β	β	β	β	β	β	β
Block I. Individual factors												
Constant												
Male/female[§]	0.13*	0.05	0.08*	0.01	−0.04	−0.06	−0.07	−0.10*	−0.09*	−0.05	−0.07*	−0.03
Age	−0.12*	0.03	<0.01	0.03	1.31*	0.04	−0.01	0.04	−0.01	0.03	0.06	0.01
Education level (0–4)	−0.01	−0.04	−0.03	−0.01	−0.03	−0.02	0.03	0.03	0.04	0.04	0.04	0.05
Married and living with spouse/other status[§]	0.18*	0.17*	0.07*	0.27*	0.25*	0.08*	0.39*	0.39*	0.26*	0.20*	0.19*	0.05
Currently working/not working[§]	0.21*	0.08*	0.08*	0.14*	0.06	0.08*	0.09	0.05	0.06	0.12*	0.08*	0.10*
Sufficient income level (0–2)	0.25*	0.31*	0.23*	0.46*	0.50*	0.32*	0.47*	0.49*	0.34*	0.68*	0.69*	0.54*
Duration of stroke (1–5)	0.21*	0.01	0.03	0.08	−0.04	<0.01	−0.08	−0.13*	−0.10*	−0.09*	−0.13*	−0.10*
High comorbidity (CCI ≥ 2)/low (CCI < 2)[§]	0.02	−0.01	<0.01	−0.02	−0.03	<0.01	−0.01	−0.01	0.01	<0.01	−0.01	0.03
Block II. Functional outcome												
Functional outcome (BI 0–100)		0.71*	0.70*		0.46*	0.53*		0.19*	0.23*		0.17*	0.20*
Block III. Social support												
Emotional support (5–25)			0.22*			0.26*			0.20*			0.22*
Informational support (4–20)			−0.02			0.03			0.08			0.11*
Functional support (4–20)			−0.01			0.19*			0.10*			0.03
Financial support (3–15)			0.01			0.08			0.03			0.09*
Explained variance (R^2)	32.22%*	70.70%*	73.59%*	37.30%*	53.15%*	66.03%*	43.98%*	46.69%*	54.17%*	58.64%*	60.82%*	69.74%*
Change of variance (R^2 change)		38.49%*	2.89%*		15.85%*	12.89%*		2.71%*	7.48%*		2.18%*	8.93%*

Note: β = standardized regression coefficients; BI = Barthel Index; CCI = Charlson Comorbidity Index; [§]References; *p value < .05.

stroke patients from avoidable complications. The traditional concept of social support (House, 1981) states that informational support and instrumental support (including money) are important for individuals to handle problems. However, only the environment domain was found to be significantly affected by the informational and financial support in this study. The results of this study showed the QoL of patients with stroke in the city who received advanced medical care for stroke might have better health outcomes than those who received less comprehensive health care, especially in rural communities. The socioeconomic status of this study population was moderately good; respondents in this study had a higher level of education and income compared to patients in other Thai studies (Rachpukdee et al., 2013; Singhpoo et al., 2012; Wannasiri, Pharm, & Kapol, 2010). After controlling such a good socioeconomic background, the effects of functional status and social support on QoL were obvious. Therefore, we can be certain that promoting functional outcome and social support were important factors to increase QoL of stroke-affected individuals. More short-term rehabilitation programs should be provided in hospitals. Apart from improving patients' functional ability, it prepares the patients and their family members for taking care of themselves and their loved ones when they get discharged from the hospital. Policy makers should provide rehabilitation programs, equipment, and places in the community where patients can promote their health for the long term, especially for those who are not married or living with a spouse or not currently working. Moreover, social support should be promoted along with these recovering programs since both functional outcome and social support had a positive effect on QoL.

Strengths and limitations

This study recruited consecutive patients who attended both inpatient and outpatient neurological clinics over a six-month period; this means the collected data covered various types of patients with stroke. This variety meant we were able to demonstrate the effect of each variable on the outcome more accurately. Another strength of the study was that we used standardized and validated tools already found to be acceptably reliable for this specific population (Lima et al., 2014; Pan et al., 2008). This study confirmed that the WHOQOL-BREF questionnaire is a psychometric instrument suitable for measuring QoL among stroke patients. Moreover, collecting data by interview gave us the opportunity to clarify questions or answers with respondents, so we could be assured that all responses correctly represented patients' perceptions. Further study should compare the results of WHOQOL-BREF with a stroke-specific, health-related QoL questionnaire to provide insight into the design of rehabilitation intervention.

Some limitations were noted in this study. Because this study employed a cross-sectional design, we were unable to assess changes in QoL relative to stroke occurrence; however, we did collect data at the time respondents reported suffering from stroke and controlled for its effect in the multivariate level of analysis. Data on QoL was lacking from patients with stroke who could not cognitively communicate. This study did not assess depression, which might affect stroke survivors' QoL (as seen in Wan-Fei et al., 2017). This study was conducted in a single advanced tertiary hospital in Bangkok, which emphasized QoL of stroke patients in an urban community. Future research is needed to explore factors in different healthcare settings that provide different stroke

management or resources, to gain more knowledge on QoL of stroke patients in urban area.

In conclusion, this study showed that patients with stroke had a moderate QoL. The study revealed the significant effects of functional outcome and social support on QoL. We found that functional outcome and social support significantly influenced all QoL domains of patients after stroke. Moreover, functional outcome positively affected the psychological domain of QoL similarly to the social relations domain of QoL. QoL-environment predictors included functional outcome, emotional support, informational support, and financial support when controlled for individual factors. We believe that the findings from this study would be beneficial when planning appropriate care or rehabilitation programs to improve the QoL of patients with stroke.

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