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Hubungan Antara Dukungan Keluarga Dengan Perilaku Perawatan Hipertensi Yang Dilakukan Oleh Keluarga Di Rumah

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Abstrak

Latar Belakang: Angka prevalensi hipertensi akan terus meningkat secara global dan diprediksikan pada tahun 2025 sebanyak 29% orang dewasa di seluruh dunia akan mengalami hipertensi. Hipertensi yang tidak mendapatkan penanganan yang baik akan menyebabkan komplikasi yang merupakan penyebab kematian nomor 5 pada semua kelompok umur. Agar terhindar dari komplikasi maka dibutuhkan dukungan keluarga untuk melakukan perawatan hipertensi.
Tujuan: Untuk mengetahui hubungan dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah.
Metode Penelitian: Desain penelitian *korelasional* dengan pendekatan *cross-sectional* digunakan dalam penelitian ini. Sampel yang bersedia menjadi responden sejumlah 35 responden dengan teknik *simple random sampling.* Uji *Chi-Square* digunakan untuk menganalisa data.
Hasil: Ada hubungan yang signifikan antara dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah dengan nilai *p-value* = 0,003. Sedangkan bentuk dukungan keluarga yang berhubungan dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah adalah dukungan instrumental (*p-value* = 0,001), dukungan informasi (*p-value* = 0,000) dan dukungan emosional (*p-value* = 0,004). Jadi dapat disimpulkan bahwa dukungan keluarga perlu diperhatikan dalam melakukan perawatan hipertensi di rumah.

Kata kunci: dukungan keluarga, hipertensi, perilaku perawatan

The Relationship Between Family Support And Caring Behavior of Hypertension by Families at Home

Abstract

Background: *Hypertension prevalence rates will continue to increase globally and it is predicted in 2025 as many as 29% of adults worldwide will experience to have hypertension. Hypertension with inadequate treatment will cause complications which is the number fifth cause of death in all ages. In order to avoid complications, family support was required to treat hypertension.*
Objective: *To determine the relationship between family support and caring behavior of hypertension by families at home,*
Methods: *Correlational research design with cross sectional approach was used. A sample of 35 respondents willing to join by simple random sampling. Chi-Square Test was used to analyze the data.*
Results: *There was a significant relationship between family support and caring behavior of hypertension by families at home with value p-value = 0,003. While the domain of family support which related to caring behavior of hypertension by families at home are instrumental support (p-value = 0,001), informational support (p-value = 0,000) and emotional support (p-value = 0,004). Finally, it can be concluded family support need to be considered in treating hypertension at home.*

Keywords: *caring behavior, family support, hypertension*

Pendahuluan

Data World Health Organization (WHO) menyatakan bahwa hipertensi adalah salah satu kontributor utama penyakit jantung dan stroke yang merupakan penyebab kematian dan kecacatan nomor satu di dunia (WHO, 2012). WHO juga menyatakan bahwa pasien hipertensi terbanyak ada di negara berkembang. Data Riset Kesehatan Dasar (Riskesdas) (2013) menunjukkan bahwa hipertensi di Indonesia memiliki prevalensi tertinggi sebesar 25,8% dibandingkan dengan penyakit yang lain (kanker, diabetes melitus, penyakit jantung koroner, gagal jantung, stroke, dan gagal ginjal). Jika dilihat dari seluruh provinsi di Indonesia, Jawa Barat termasuk Kecamatan Bekasi Timur menempati urutan terbanyak ke-4 untuk prevalensi hipertensi. Hasil Survei Indikator Kesehatan Nasional tahun 2016 menunjukkan bahwa prevalensi hipertensi meningkat menjadi 32,4% (Kemenkes RI, 2017). Angka prevalensi hipertensi akan terus meningkat secara global dan diprediksikan pada tahun 2025 sebanyak 29% orang dewasa di seluruh dunia akan mengalami hipertensi (Kemenkes RI, 2017).

Hipertensi yang tidak mendapatkan penanganan yang baik akan menyebabkan komplikasi penyakit lain. Data WHO (2012)

menyebutkan bahwa hipertensi merupakan kondisi berisiko tinggi yang menyebabkan kematian akibat stroke (51%) dan jantung koroner (45%). Hal ini menjadi sangat penting untuk diperhatikan agar komplikasi hipertensi dapat dicegah dan kualitas kesehatan pasien hipertensi dapat di tingkatkan.

Kualitas kesehatan pasien hipertensi tersebut dapat ditingkatkan dengan cara memodifikasi gaya hidup yaitu dengan membatasi asupan garam, menurunkan berat badan, menghindari minuman berkafein, berhenti merokok dan menghindari minuman beralkohol (Kemenkes RI, 2014). Olahraga juga dianjurkan bagi pasien hipertensi. Istirahat (6-8 jam) dan mengendalikan stress juga penting untuk pasien hipertensi (Kemenkes RI, 2014). Selain itu mengajak keluarga untuk ikut berperan serta dalam program perawatan atau pengobatan hipertensi merupakan *support* sistem yang penting bagi pasien hipertensi.

Dukungan keluarga merupakan faktor penting dalam proses pengobatan dan pencegahan penyakit hipertensi. Keluarga memiliki peranan penting dalam pengawasan dan pencegahan terjadinya komplikasi hipertensi serta dapat memberikan dukungan dan membuat keputusan mengenai perawatan yang dilakukan oleh pasien hipertensi (Tumenggung, 2013). Selain itu juga dukungan keluarga merupakan unsur penting dalam keberhasilan untuk mempertahankan dan menjaga kesehatan setiap individu anggota keluarga (Friedman, Marilyn, M., Bowden, V. R., & Jones, 2010). Sehingga hubungan antara pasien dan keluarga sangatlah kuat.

Hasil penelitian sebelumnya menjelaskan adanya hubungan antara dukungan keluarga dengan kepatuhan diet hipertensi, perilaku pengendalian hipertensi, dan perilaku perawatan hipertensi (Dewi, K. C. C., Prapti, N. K. G., & Saputra, 2016; Herlinah, L., Wiarsih, W., & Rekawati, 2013; Susriyanti, 2014). Pasien hipertensi yang mendapat dukungan keluarga yang tinggi, akan meningkatkan perilaku perawatan hipertensi (Susriyanti, 2014). Akan tetapi, hal ini memerlukan penelitian lebih lanjut untuk memastikan bentuk dukungan keluarga yang berhubungan dengan persepsi pasien tentang perilaku perawatan hipertensi oleh keluarga di rumah pada populasi yang berbeda.

Hasil studi pendahuluan menunjukkan bahwa jumlah pasien hipertensi pada bulan Januari 2018 sebanyak 245 pasien hipertensi yang berobat ke Puskesmas Karang Kitri, Kelurahan Margahayu, Kecamatan Bekasi Timur. Hasil wawancara dengan 10 pasien hipertensi pada tanggal 4 Februari 2018 di wilayah RW 03 Kelurahan Margahayu Kecamatan Bekasi Timur bahwa pasien hipertensi mengatakan jarang memeriksa kesehatannya. Pasien melakukan pemeriksaan kesehatan pada saat kondisi menurun saja. Pasien tidak dilarang oleh keluarganya untuk makan atau minum yang pasien sukai. Pasien juga tidak pernah berolahraga dikarenakan

keluarganya tidak pernah memberikan *support* untuk berolahraga serta tidak menemani saat berolahraga. Padahal pasien mengatakan tinggal bersama keluarganya. Maka dari itu, tujuan penelitian ini adalah untuk mengidentifikasi hubungan antara dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah.

Bahan dan Metode

Penelitian ini merupakan penelitian kuantitatif dengan metode deskriptif korelasional. Desain penelitian yang digunakan adalah dengan rancangan cross-sectional. Variabel independen dalam penelitian ini adalah dukungan keluarga, sedangkan variabel dependen adalah perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah. Penelitian ini dilakukan di wilayah RW 03 Kelurahan Margahayu Kecamatan Bekasi Timur, yaitu pada bulan Maret-Juli tahun 2018. Teknik pengambilan sampel yang digunakan adalah dengan menggunakan teknik *simple random sampling.* Jumlah sampel yang bersedia menjadi responden sebanyak 35 orang dengan kriteria inklusi dan eklusi.

Kriteria inklusinya adalah warga RW 03 Kelurahan Margahayu Kecamatan Bekasi Timur yang memiliki penyakit hipertensi, memiliki tekanan darah > 140/90 mmHg, tinggal bersama dengan keluarga, berjenis perempuan atau laki-laki, mampu untuk membaca dan atau menulis, dan bersedia untuk menjadi responden. Sedangkan kriteria eklusinya adalah warga RW 03 Kelurahan Margahayu Kecamatan Bekasi Timur yang mengalami gangguan jiwa, mengalami masalah pendengaran dan penglihatan, dan tinggal sendiri.

Hasil pengujian validitas dari 25 responden indikator variabel dukungan keluarga dinyatakan valid karena nilai r hitung lebih besar dari r tabel. Sedangkan hasil reliabilitas menunjukkan bahwa pernyataan variabel dukungan keluarga dengan cronbach's alpha 0,96 dan pernyataan variable persepsi pasien tentang perilaku perawatan hipertensi oleh keluarga di rumah dengan cronbach's alpha 0,97. Maka kedua kuesioner tersebut dinyatakan sangat reliabel. Untuk masing-masing pernyataan bentuk dukungan keluarga yang berupa dukungan penghargaan dinyatakan cukup reliabel dengan cronbach's alpha 0,53, dukungan instrumental dinyatakan reliabel dengan cronbach's alpha 0,71, dukungan informasi dan dukungan emosional dinyatakan sangat reliabel dengan cronbach's alpha 0,96 dan 0,87.

Hasil Penelitian

a. Karakteristik Pasien

Karakteristik pasien dalam penelitian ini meliputi usia, jenis kelamin, tingkat pendidikan, pekerjaan, lama sakit, dan hubungan dengan pasien.

Tabel 1. Distribusi Karakteristik Pasien (n=35)

Variabel	Karakteristik	n	%
Usia	36-45 tahun	6	17,1
	46-55 tahun	11	31,4
	56-65 tahun	12	34,3
	> 65 tahun	6	17,1
Jenis Kelamin	Laki-laki	10	28,6
	Perempuan	25	71,4
Tingkat Pendidikan	SD	16	45,7
	SMP	11	31,4
	SMA	4	11,4
	D3/S1	4	11,4
Pekerjaan	Bekerja	12	34,3
	Tidak bekerja	23	65,7
Lama Sakit	< 1 tahun	4	11,4
	1-5 tahun	22	62,9
	> 5 tahun	9	25,7
Hubungan dengan pasien	Pasangan	19	54,3
	Anak	16	45,7

Pada tabel 1 menunjukkan bahwa sebagian besar pasien hipertensi berusia 56-65 tahun sebanyak 12 orang (34,3%), berjenis kelamin perempuan sebanyak 25 orang (71,4%), memiliki tingkat pendidikan SD sebanyak 16 orang (45,7%), tidak bekerja sebanyak 23 orang (65,7%), lama sakit 1-5 tahun sebanyak 22 orang (62,9%), dan memiliki hubungan dengan pasien sebagai pasangan sebanyak 19 orang (54,3%).

b. Hubungan Dukungan Keluarga Dengan Perilaku Perawatan Hipertensi Yang Dilakukan Oleh Keluarga di Rumah

Pada tabel 2 menunjukkan bahwa dari hasil analisis statistik diperoleh *p-value* = 0,003 lebih kecil dari α (0,05), maka dapat disimpulkan bahwa ada hubungan yang signifikan antara hubungan dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah. Tabel 2 juga menunjukkan bahwa dari 35 pasien hipertensi, sebanyak 5 orang (83,3%) mendapatkan dukungan keluarga rendah dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah dalam kategori kurang. Sebanyak 5 orang (55,6%) mendapatkan dukungan keluarga tinggi dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah dalam kategori baik.

Selain itu jika melihat hubungan dari setiap bentuk dukungan keluarga, didapatkan data bahwa ada hubungan yang signifikan antara dukungan instrumental dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah (*p-value* = 0,001); ada hubungan yang signifikan antara dukungan informasi dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah (*p-value* = 0,000); ada hubungan yang signifikan antara dukungan emosional dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah (*p-value* = 0,004). Sedangkan untuk dukungan penghargaan tidak ada hubungan dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah(*p-value*>0,05).

Tabel 2. Hubungan Dukungan Keluarga dengan Perilaku Perawatan Hipertensi Yang Dilakukan oleh Keluarga di Rumah (n=35)

Variabel	Perilaku Perawatan Hipertensi						Total		*P-value*
	Kurang		Cukup		Baik				
	F	%	F	%	F	%	F	%	
Dukungan Keluarga									
Rendah	5	83,34	1	16,7	0	0	6	100	
Sedang	8	0	10	50	2	10	20	100	0,003*
Tinggi	0	0	4	44,4	5	55,6	9	100	
Total	13	37,1	15	42,9	7	20	35	100	
Bentuk Dukungan Keluarga									
Dukungan penghargaan									
Rendah	1	100	0	0	0	0	1	100	
Sedang	12	40	12	40	6	20	30	100	0,124
Tinggi	0	0	3	75	1	25	4	100	
Total	13	37,1	15	42,9	7	20	35	100	
Dukungan instrumental									
Sedang	13	43,3	14	46,7	3	10	30	100	
Tinggi	0	0	1	20	4	80	5	100	0,001*
Total	13	37,1	15	42,9	7	20	35	100	
Dukungan informasi									
Rendah	5	83,3	1	16,7	0	0	6	100	
Sedang	8	38,1	11	52,4	2	9,5	21	100	0,000*
Tinggi	0	0	13	37,5	5	62,5	8	100	
Total	13	37,1	15	42,9	7	20	35	100	
Dukungan emosional									
Rendah	4	100	0	0	0	0	4	100	
Sedang	8	30,8	14	53,8	4	15,4	26	100	0,004*
Tinggi	1	20	1	20	3	60	5	100	
Total	13	37,1	15	42,9	7	20	35	100	

Catatan: *Signifikan dengan *p-value* < 0,05

Pembahasan

a. Karakteristik Pasien

Sebagian besar pasien hipertensi pada penelitian ini berusia 56-65 tahun. Hasil penelitian ini sejalan dengan hasil penelitian lain dimana usia pasien pada rentang 55-61 tahun (Adriani, 2018). Usia ini masuk dalam kategori masa lansia akhir (Depkes RI, 2009). Umur > 40 tahun memiliki resiko terkena hipertensi sebesar 11,71 kali dibandingkan dengan umur < 40 tahun (Anggara, F. H., & Prayitno, 2013). Semakin bertambahnya usia mengakibatkan tekanan darah meningkat, karena dinding arteri pada usia lanjut akan mengalami penebalan yang mengakibatkan penumpukan zat kolagen pada lapisan otot, sehingga pembuluh darah akan berangsur-angsur menyempit dan menjadi kaku (Anggraini, A. D., Waren, A., Situmorang, E., Asputra, H., & Siahaan, 2009).

Hasil penelitian menunjukkan bahwa perempuan memiliki resiko hipertensi setelah berusia diatas 45 tahun karena efek dari menopouse (Sigalingging, 2011). Hal ini terjadi karena sebelum masa menopuse tubuh perempuan dilindungi oleh hormon estrogen yang berperan dalam meningkatkan kadar *High Density Lipoprotein* (HDL). Jika Kadar HDL rendah dan LDL (*Low Density Lipoprotein*) tinggi, maka akan

mempengaruhi terjadinya proses aterosklerosis yang berujung pada penyempitan pembuluh darah, dan pada akhirnya terjadilah hipertensi (Anggraini, A. D., Waren, A., Situmorang, E., Asputra, H., & Siahaan, 2009). Hal ini diperkuat dalam bahwa perempuan beresiko terkena hipertensi (Trianni, 2013; Wahyuni., dan Eksanoto, 2013). Untuk jenis kelamin tidak ada hubungannya dengan perilaku perawatan hipertensi (Herlinah, L., Wiarsih, W., & Rekawati, 2013).

Hasil penelitian ini mayoritas pasien hipertensi berpendidikan SD. Hal ini juga disebutkan dalam penelitian lain (Adriani, 2018; Trianni, 2013). Pasien yang berpendidikan tinggi akan mudah menyerap informasi dan akan memiliki pengetahuan yang lebih baik dari pada pasien dengan tingkat pendidikan yang rendah (Agrina, A., Rini, S. S., & Hairitama, 2011). Menurut Notoatmodjo (2003) menyatakan bahwa sebagian besar pengetahuan dipengaruhi oleh pengalaman yang didapat dari diri sendiri maupun orang lain, pengalaman dapat diperoleh dari lamanya pasien mengalami suatu penyakit. Secara logika angka kejadian hipertensi cenderung terjadi pada orang dengan pendidikan rendah karena ketidaktahuan tentang gaya hidup sehat. Menurut Sugiharto (2007) menyatakan bahwa tingkat pendidikan dapat mempengaruhi kemampuan dan pengetahuan seseorang dalam menerapkan perilaku hidup sehat, terutama dalam perilaku perawatan hipertensi. Semakin tinggi tingkat pendidikan maka semakin tinggi pula kemampuan seseorang dalam menjaga pola hidupnya agar tetap sehat.

Sebagian besar pasien dalam penelitian ini tidak bekerja yaitu sebesar 65,7%. Hasil penelitian ini sesuai dengan penelitian Siringoringo, M., Hiswani (2013) bahwa 60,54% pasien juga tidak bekerja. Menurut penelitian Anggara dan Prayitno (2013) menyatakan bahwa orang yang tidak bekerja lebih beresiko menderita hipertensi dari pada yang bekerja karena bekerja akan meningkatkan aktivitas fisik sehingga menurunkan resiko hipertensi.

b. Hubungan dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah

Teori tentang dukungan keluarga menjelaskan bahwa sikap, tindakan, dan penentuan keluarga terhadap pasien yang sakit (Friedman, Marilyn, M., Bowden, V. R., & Jones, 2010). Dukungan keluarga sangat diperlukan oleh seorang pasien, karena seseorang yang sedang sakit tentunya membutuhkan perhatian dari keluarga. Perhatian dari keluarga tersebut dapat berupa kasih sayang, perhatian, maupun dukungan terhadap perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah. Keluarga dengan dukungan yang baik akan menghasilkan perilaku perawatan hipertensi yang baik juga. Sedangkan keluarga dengan dukungan keluarga yang rendah, mereka sibuk

dengan urusannya sendiri sehingga kurang memperhatikan terhadap keluarga yang sedang sakit.

Hasil penelitian ini membuktikan bahwa ada hubungan yang signifikan antara dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah. Hasil penelitian ini sesuai dengan hasil penelitian Susriyanti (2014)yang menunjukkan bahwa ada hubungan yang signifikan antara dukungan keluarga dengan perilaku perawatan hipertensi. Hasil penelitian lain yang mendukung yaitu penelitian (Herlinah, L., Wiarsih, W., & Rekawati, 2013) yang menunjukkan ada hubungan antara dukungan keluarga dengan perilaku lansia terhadap pengendalian hipertensi. Ini merefleksikan bahwa dukungan keluarga sangat bermanfaat bagi pasien dalam manajemen perawatan hipertensi.

Menurut Maryam (2008) menjelaskan bahwa keluarga merupakan *support system* utama bagi keluarganya dalam mempertahankan kesehatannya. Peranan keluarga dalam perawatan keluarga antara lain menjaga atau merawat keluarga, mempertahankan dan meningkatkan status mental serta memberikan motivasi dan memfasilitasi kebutuhan spiritual. Dukungan keluarga merupakan suatu bentuk bantuan yang bertujuan untuk merawat seseorang anggota keluarga dirumah yang mengalami ketidakmampuan atau keterbatasan. Menurut Efendi (2009) mengatakan bahwa keluarga terdiri dari anggota yang saling ketergantungan satu sama lainnya dan berpengaruh dengan yang lainnya. Keluarga bisa menjadi motivator kuat bagi pasien hipertensi apabila keluarga selalu meluangkan waktunya serta menyediakan diri untuk mendampingi dan mengantarkan pasien hipertensi ke pelayanan kesehatan untuk melakukan pemeriksaan tekanan darah. Maka dapat disimpulkan bahwa semakin tinggi dukungan keluarga terhadap pasien maka akan semakin tinggi pula pasien mendapatkan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah.

Kesimpulan

Pada penelitian dapat disimpulkan sebagai berikut:

1. Karakteristik pasien hipertensi tergolong dalam usia lansia akhir, berjenis kelamin perempuan, berpendidikan SD, tidak bekerja, mengalami penyakit hipertensi selama 1-5, dan memiliki hubungan dengan pasien sebagai pasangan.
2. Ada hubungan yang signifikan antara dukungan keluarga dengan perilaku perawatan hipertensi yang dilakukan oleh keluarga di rumah.

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HUBUNGAN DUKUNGAN KELUARGA DENGAN UPAYA PERAWATAN KESEHATAN LANJUT USIA HIPERTENSI DIMASA PANDEMI COVID-19

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ABSTRAK

Kejadian hipertensi di dunia diprediksikan akan meningkat setiap tahunnya dan mencapai 29,2% pada tahun 2025. Hipertensi dapat mengancam kesehatan masyarakat khususnya lanjut usia karena mempunyai potensi yang dapat menyebabkan komplikasi seperti stroke, jantung koroner dan gagal ginjal sehingga memerlukan pengobatan secara rutin. Usia lanjut dan hipertensi merupakan salah satu kondisi yang dianggap sebagai komorbid COVID-19, sehingga dapat meningkatkan tingkat keparahan dan kematian pada seseorang. Dukungan keluarga sangat dibutuhkan oleh penderita hipertensi agar dapat melaksanakan rencana perawatan yang telah ditetapkan dan mematuhi aturan terapinya khususnya dimasa pandemi COVID-19. Penelitian ini bertujuan untuk melihat adanya Hubungan Dukungan Keluarga Dengan Upaya Perawatan Kesehatan Lanjut usia Hipertensi Dimasa Pandemi COVID-19. Jenis penelitian ini adalah Deskriptif Korelasi dengan menggunakan desain *Cross Sectional*. Jumlah sampel sebanyak 96 responden lanjut usia yang menderita hipertensi di desa Kangkung, Mranggen, Demak, berusia ≥ 60 tahun, sedang menjalani terapi anti hipertensi, rutin melakukan pengobatan hipertensi di Puskesmas Mranggen I dan tinggal bersama keluarga. Teknik pengambilan sampel dengan menggunakan Teknik *proporsional random sampling*. Alat pengumpulan data menggunakan kuesioner dan dianalisis dengan menggunakan uji *Chi Square*. Hasil penelitian menunjukkan bahwa terdapat 66 responden (68,75%) telah melakukan upaya perawatan kesehatan dengan baik. Terdapat dukungan keluarga yang baik sebesar 85 responden (88,55 ada hubungan antara dukungan keluarga dengan upaya perawatan kesehatan lanjut usia hipertensi dimasa pandemi COVID-19 dengan nilai p value sebesar p= 0,048 (p value <0,05). Berdasarkan hasil tersebut diharapkan lanjut usia hipertensi penderita agar tetap teratur melakukan upaya perawatan kesehatan khususnya kontrol rutin di pelayanan kesehatan meskipun dalam keadaan pandemi COVID-19 dengan memperhatikan protokol kesehatan sehingga dapat mencegah kemungkinan terjadinya komplikasi. Keluarga selalu memberikan motivasi dan dukungan kepada lanjut usia hipertensi untuk selalu melakukan upaya perawatan kesehatan dan membantu melakukan kontrol rutin di pelayanan kesehatan yang ada.

Kata kunci: Dukungan keluarga, perawatan, lanjut usia, hipertensi

ABSTRACT

The incidence of hypertension in the world is predicted to increase every year and reach 29.2% in 2025. Hypertension can threaten public health, especially the elderly because it has the potential to cause complications such as stroke, coronary heart disease and kidney failure so that it requires regular treatment. Old age and hypertension are one of the conditions that are considered as comorbid COVID-19, so that it can increase the severity and death of a person. Family support is needed by people with

hypertension so that they can carry out the treatment plan that has been determined and comply with the rules of therapy, especially during the COVID-19 pandemic. This study aims to see the relationship between family support and health care efforts for the elderly with hypertension during the COVID-19 pandemic. This was descriptive correlation study with cross sectional design. The number of samples was 96 elderly respondents who suffer from hypertension in Kangkung village, Mranggen, Demak, aged 60 years, currently undergoing anti-hypertensive therapy, routinely taking hypertension treatment at the Puskesmas Mranggen 1 and living with family. The sampling technique used was proportional random sampling technique. Data collection tools using a questionnaire and analyzed using the Chi Square test. The results showed that there were 66 respondents (68.75%) who had made good health care efforts. There was good family support of 85 respondents (88.55) there was a relationship between family support and health care efforts for the elderly with hypertension during the COVID-19 pandemic with a p value of p = 0.048 (p value <0.05). Based on these results, it was expected elderly hypertension sufferers to continue to regularly carry out health care efforts, especially routine checks in health services even in a state of the COVID-19 pandemic by paying attention to health protocols so as to prevent possible complications. Families always provide motivation and support for hypertensive elderly to always take care health and help carry out routine checks in existing health services.

Keywords: Family support, care, elderly, hypertension

LATAR BELAKANG

Salah satu penyakit yang menjadi masalah kesehatan di seluruh dunia adalah hipertensi. Berdasarkan prediksi WHO angka kejadian hipertensi di dunia akan meningkat setiap tahunnya dan mencapai 29,2% pada tahun 2025(Soesanto and Marzeli, 2020). Hasil Riskesdas 2018 menunjukkan angka prevalensi hipertensi pada penduduk > 18 tahun secara nasional berdasarkan pengukuran sebesar 34,11% dan 41 % diantaranya tidak rutin melakukan pengukuran dan kontrol kesehatannya(Kemenkes, 2018). Di Jawa Tengah prevalensi penyakit hipertensi sebanyak 8.070.378 penderita atau sebesar 37,5 %(Dinas Kesehatan Jawa Tengah, 2020). Penderita Hipertensi di Kabupaten Demak sebanyak 309.697 orang dan 19 % diantaranya lanjut usia yang berada di Wilayah kerja Puskesmas Mranggen I(Dinkes Kab. Demak, 2019; Seksi Pencegahan dan Pengendalian Penyakit Tidak Menular dan Kesehatan Jiwa, 2020).

Penyakit hipertensi memiliki hubungan erat dengan bertambahannya usia seseorang dan merupakan penyakit degeneratif, bersifat menahun yang dapat mempengaruhi kualitas hidup serta produktivitas seseorang. Penyakit Hipertensi selain membutuhkan penatalaksanaan dan pengobatan jangka panjang juga melakukan perubahan gaya hidup yang meliputi; menurunkan berat badan, diet sehat, menurunkan konsumsi sodium, mengurangi lemak, melakukan aktivitas fisik, dan mengendalikan stress dengan baik (PK *et al.*, 2018). Hipertensi dapat mengancam kesehatan masyarakat khususnya lanjut usia karena mempunyai potensi yang dapat menyebabkan komplikasi seperti stroke, jantung koroner dan gagal ginjal sehingga memerlukan pengobatan secara rutin. Beberapa penelitian sebelumnya juga menyampaikan bahwa pengobatan hipertensi

dipengaruhi oleh ketaatan mengkonsumsi obat hipertensi(Saepudin, 2011). Hipertensi merupakan suatu penyakit yang tidak bisa disembuhkan namun harus selalu dikontrol ataupun dikendalikan supaya tidak mengalami komplikasi yang bisa berakhir dengan kematian(Mangendai, Rompas and Hamel, 2017). Selain itu menurut peneliti lainnya dikatakan bahwa ketidak teraturan dalam melakukan perawatan dan pengobatan secara rutin dikarenakan mayoritas penderitanya merasakan bosan untuk melakukan pengobatan karena membutuhkan waktu yang lama dan dapat membebani keluarga(Ihwatun *et al.*, 2020).

Pada bulan Desember 2019 dunia digemparkan oleh munculnya penyakit baru bernama Coronavirus Disease 2019 (COVID-19). Virus ini begitu cepat menyebar ke seluruh penjuru dunia tak terkecuali Indonesia dan pada bulan Maret 2020 WHO menyatakan sebagai pandemi. *Severe Acut respiratory Syndrome Coronavirus* 2 (SARS-CoV-2) menular dari manusia ke manusia dengan menginfeksi saluran pernafasan melalui percikan (*droplet*) sehingga menimbulkan penyakit yang disebut dengan Coronavirus Disease 2019 (COVID-19). Sampai dengan akhir bulan mei 2021 jumlah kasus yang terkonfirmasi positif COVID-19 sebanyak 1.821.703 kasus, 11,3 % kasus tersebut diantaranya terjadi pada lanjut usia dan penyakit penyerta yang tertinggi adalah hipertensi sebanyak 50,3%(COVID-19, 2021). Usia lanjut dan hipertensi merupakan salah satu kondisi yang dianggap sebagai komorbid COVID-19, sehingga dapat meningkatkan tingkat keparahan dan kematian pada seseorang. Pada masa pandemi COVID-19 jumlah kunjungan lanjut usia hipertensi di puskesmas Mranggen I mengalami penurunan dari tahun 2019 sebesar 66% menjadi 51 % pada tahun 2020(Dinkes Kab. Demak, 2019). Hasil survay yang dilakukan peneliti sebelumnya kepada beberapa lanjut usia yang tidak melakukan kunjungan ulang atau kontrol ke puskesmas dikarenakan rasa takut tertular penyakit COVID-19, sudah merasa sehat, tidak ada keluarga yang mengantar ke puskesmas dan mengingatkan kalau harus melakukan kontrol secara rutin serta adanya anjuran untuk tetap dirumah.

Dukungan keluarga sangat dibutuhkan oleh penderita hipertensi agar dapat melaksanakan rencana perawatan yang telah ditetapkan dan mematuhi aturan terapinya khususnya dimasa pandemi COVID-19. Berdasarkan hasil penelitian sebelumnya dukungan keluarga merupakan salah satu faktor yang terpenting dalam program pengobatan dan pengendalian penyakit hipertensi(Yeni and Husna, 2016). Dukungan keluarga dapat menunjang keberhasilan terapi hipertensi karena memiliki hubungan erat dengan kepatuhan minum obat(Widyaningrum, Retnaningsih and Tamrin, 2019).

METODE PENELITIAN

Jenis penelitian ini adalah Deskriptif Korelasi dengan menggunakan desain *Cross Sectional*. Jumlah sampel sebanyak 96 responden lanjut usia yang menderita hipertensi di desa Kangkung, Mranggen, Demak, berusia ≥ 60 tahun, sedang menjalani terapi anti hipertensi, rutin melakukan pengobatan hipertensi di Puskesmas Mranggen I dan tinggal bersama keluarga. Teknik pengambilan sampel dengan menggunakan Teknik *proporsional random sampling*. Jumlah sampel terdiri dari 26 lanjut usia hipertensi dari dusun Senggrong, 28 lanjut usia hipertensi dari dusun Krajan, dan 42 lanjut usia hipertensi dari dusun Karang. Alat pengumpulan data menggunakan kuesioner, dianalisis dengan menggunakan uji *Chi Square*.

HASIL DAN PEMBAHASAN

Karakteristik responden pada penelitian ini berdasarkan umur rata-rata 70 tahun ± 7,19, usia terendah adalah 60 tahun dan tertinggi 87 tahun. Sedangkan menurut jenis kelamin sebagian besar adalah perempuan sebanyak 56 orang (58,3%). Rata rata lama menderita hipertensi sejak 4,5 tahun ± 3,24, lama menderita hipertensi paling awal adalah 1 tahun dan terlama sejak 17 tahun. Jarak tempuh ke Puskesmas rata-rata 3,97 km ± 4,05, jarak terdekat 0,6 km dan terjauh 2,5 km.

Rata-rata upaya perawatan kesehatan yang dilakukan lanjut usia hipertensi dimasa pandemi COVID-19 adalah 5,5±1,7 dengan nilai minimal 2 dan maksimal 8. Sebagian besar Lanjut usia Hipertensi telah melakukan upaya perawatan kesehatan dengan baik yaitu sebesar 68,75%. Hal ini bisa dilihat dalam tabel 1.

Tabel 1. Deskripsi Upaya Perawatan Kesehatan Lanjut Usia Hipertensi Dimasa Pandemi COVID-19

No	Upaya Perawatan Kesehatan	Frekuensi (n)	Persentase (%)
1	Kurang	30	31,25
2	Baik	66	68,75
Jumlah		96	100

Upaya perawatan kesehatan lanjut usia hipertensi dimasa pandemi COVID-19 sebagian besar telah baik, terutama dalam hal: telah mengurangi makanan yang menyebabkan hipertensi, bekerja tidak terlalu berat, minum obat secara teratur dan istirahat cukup. Sedangkan yang masih

kurang diantaranya adalah: tidak melakukan pemeriksaan secara rutin, tidak bisa berhenti merokok dan sering merasa stres atau cemas.

Rata-rata dukungan yang diberikan keluarga kepada lanjut usia untuk melakukan upaya perawatan kesehatan sebesar 9,04±1,96 dengan nilai minimal 2 dan maksimal 11. Sebagian besar Dukungan yang telah diberikan keluarga kepada lanjut usia hipertensi untuk melakukan upaya perawatan kesehatan adalah baik yaitu sebesar 88,55%. Hal ini bisa dilihat dalam tabel 2.

Tabel 2. Deskripsi Dukungan Keluarga kepada Lanjut Usia Hipertensi untuk Melakukan Upaya Perawatan Kesehatan Dimasa Pandemi COVID-19

No	Dukungan Keluarga	Frekuensi (n)	Persentase (%)
1	Kurang	11	11,45
2	Baik	85	88,55
Jumlah		96	100

Dukungan Keluarga kepada Lanjut Usia Hipertensi untuk melakukan upaya perawatan kesehatan dimasa pandemi COVID-19 sebagian besar telah baik terutama dalam hal: mengingatkan untuk periksa rutin, mengingatkan untuk minum obat, mengingatkan untuk mengurangi garam dan menyarankan untuk selalu berdoa, mengantar periksa, membantu biaya periksa. Sedangkan yang masih kurang diantaranya adalah: mengingatkan untuk berhenti merokok.

Tabel 3. Hubungan antara Dukungan Keluarga dengan Upaya Perawatan Kesehatan Lanjut usia Hipertensi Dimasa Pandemi COVID-19.

No	Dukungan Keluarga	Upaya Perawatan Kesehatan				Total	
		Kurang		Baik			
		n	%	n	%	n	%
1	Kurang	8	26,67	22	73,33	30	100
2	Baik	22	33,33	44	66,67	66	100
Jumlah		30	31,25	66	68,75	96	100

p= 0,048

Dari hasil analisis diketahui bahwa ada hubungan antara dukungan keluarga dengan upaya perawatan kesehatan lanjut usia hipertensi dimasa pandemi COVID-19 (p=0,048). Disamping itu dapat diketahui bahwa ada sebanyak 22 lanjut usia hipertensi (73,33%) telah melakukan upaya perawatan kesehatan dengan baik meskipun kurang mendapatkan dukungan keluarga dan ada 22 lanjut usia hipertensi yang telah mendapatkan dukungan keluarga yang baik tetapi masih kurang

dalam upaya perawatan kesehatannya. Upaya perawatan kesehatan yang telah dilakukan oleh lanjut usia hipertensi merupakan suatu usaha untuk mengontrol tekanan darahnya agar selalu berada pada batas normal. Upaya perawatan kesehatan yang baik akan membantu mengurangi terjadinya komplikasi. Upaya perawatan kesehatan merupakan suatu tindakan yang dilakukan untuk mencegah dan mengurangi terjadinya komplikasi yang timbul akibat penyakit hipertensi yang tidak terkontrol dengan baik, sehingga upaya perawatan kesehatan tersebut harus dilakukan secara terus-menerus.

Pada masa pandemi COVID-19 ternyata berpengaruh terhadap rutinitas lanjut usia yang menderita hipertensi untuk melakukan upaya perawatan kesehatan secara kontinyu dan masuk dalam katagori kurang sebanyak 31,25 %. Salah satu upaya perawatan kesehatan yang masih kurang diantaranya adalah tidak melakukan pemeriksaan secara rutin, hal ini disebabkan karena ada rasa takut akan tertular penyakit COVID-19, harus antri lama karena jumlah yang dilayani menjadi berkurang karena penerapan protokol kesehatan, keluarga lebih menyarankan untuk tinggal dirumah saja karena banyaknya kasus lanjut usia yang terkena penyakit COVID-19. Hal senada juga disampaikan oleh peneliti lainnya bahwa penurunan kunjungan dimasa pandemi COVID-19 salah satunya karena kurangnya motivasi penderita dan kurangnya dukungan keluarga(Ayuningtiyas and R, 2020). Penderita hipertensi yang tidak melakukan kontrol rutin maka akan mengalami kesulitan dalam mengendalikan penyakitnya, sehingga tidak mampu memelihara kesehatan dan meningkatkan derajat kesehatan yang lebih baik {Formatting Citation}.

Penyakit hipertensi dapat dikontrol dengan merubah pola makan dan gaya hidup. Upaya pencegahan yang dapat dilakukan adalah dengan melakukan pembatasan penggunaan garam hingga 4-6 gr per hari, makanan yang mengandung soda kue, bumbu penyedap dan pengawet makanan, mengurangi makanan yang mengandung kolesterol tinggi (jeroan, kuning telur, cumi-cumi, kerang, kepiting, coklat, mentega, dan margarin), menghentikan kebiasaan merokok, minum alkohol, olah raga teratur dan menghindari stres(Nuraini, 2015). Seseorang dengan hipertensi memerlukan keyakinan yang baik dalam melakukan upaya perawatan kesehatan agar muncul perilaku yang baik dalam pengelolaan hipertensi. Seseorang yang memiliki keyakinan dan semangat yang baik akan meningkatkan kepatuhan minum obat, meningkatkan aktifitas fisik, tidak merokok, diet rendah garam dan strategi pengelolaan berat badan(Nuraeni, Mirwanti and Anna, 2018).

Dukungan dari anggota keluarga yang baik memiliki peran penting dalam upaya perawatan kesehatan. Perhatian anggota keluarga mulai dari mengingatkan untuk periksa rutin, mengingatkan untuk minum obat, mengingatkan untuk mengurangi garam dan menyarankan untuk selalu berdoa, mengantar periksa, membantu biaya periksa dan mengingatkan untuk berhenti merokok terbukti lebih baik menjalani upaya perawatan dibandingkan dengan penderita hipertensi yang kurang mendapatkan perhatian dari anggota keluarganya.

Seseorang yang sedang sakit tentunya membutuhkan dukungan dan perhatian dari keluarga khususnya disaat pandemi COVID-19 seperti saat ini, karena keluarga dapat memberikan motivasi kepada anggota keluarganya yang sakit dan mendorong penderita untuk terus berpikir positif terhadap sakitnya dan patuh terhadap pengobatan yang dianjurkan oleh tenaga kesehatan sehingga dirinya mampu mempertahankan kesehatannya. Dukungan sosial merupakan salah satu faktor yang dapat memperkuat seseorang untuk melakukan suatu perilaku kesehatan yang baik, mencegah dari ancaman kesehatan dan dukungan dari keluarga merupakan suatu bentuk dukungan yang sangat kuat pada lanjut usia hipertensi dalam mengontrol kesehatannya. Hal ini juga disampaikan oleh beberapa peneliti lainnya bahwa dukungan keluarga dianggap sebagai kesediaan dari orang-orang terdekat yang berarti bagi hidup seseorang, yang dapat dipercaya mampu menolong, membantu, mendorong, menerima dan menjaga dirinya sehingga dapat menciptakan suatu harmanisasi, kesimbangan finansial, kepatuhan menjalankan terapi dan perawatan serta mencapai *psychological well-being*(Permata, Dra and Suprapti, no date). Dukungan keluarga yang semakin besar dapat mengurangi resiko terjadinya penyakit hipertensi pada lanjut usia, karena lanjut usia mendapatkan kasih sayang, bantuan dan kepercayaan yang tinggi dari anggota keluarga lainnya yang membuat lanjut usia merasa nyaman, tidak stres dan merasa sehat(Puspita, Oktaviarini and Santik, 2017).

Hasil penelitian ini menunjukkan ada hubungan antara dukungan keluarga dengan upaya perawatan kesehatan lanjut usia hipertensi dimasa pandemi COVID-19. Perubahan perilaku kesehatan seseorang cenderung memerlukan dan dukungan dari keluarga dan masyarakat disekitarnya, apabila perubahan perilaku tersebut bertentangan atau tidak memperoleh dukungan maka ia akan merasa tidak nyaman, sehingga enggan melakukan upaya pencegahan atau tentakan tertentu. Dukungan keluarga yang tinggi akan menjadikan lanjut usia hipertensi akan lebih optimis dalam menghadapi segala permasalahan termasuk melakukan upaya perawatan kesehatan saat ini maupun yang akan datang, lebih terampil dalam memenuhi kebutuhan psikologis dan memiliki

ketrampilan yang lebih baik sehingga mampu menyelesaikan permasalahan kesehatan dan mengendalikannya. Hasil penelitian ini juga didukung oleh penelitian lainnya bahwa ada hubungan antara dukungan keluarga dengan kepatuhan lanjut usia dalam mengkonsumsi obat anti hipertensi(Rangkuti, Rahayu and Hutapea, 2021). Bentuk dukungan keluarga yang baik lebih banyak disebabkan karena keluarga tidak terikat dengan pekerjaan dan memiliki banyak waktu untuk memperhatikan serta mendampingi penderita hipertensi dibandingkan dengan keluarga yang terikat pekerjaan, mereka memiliki sedikit waktu sehingga dapat menyebabkan ketidakpatuhan dalam mengkonsumsi obat dan upaya perawatan kesehatan lainnya(Oktaviani *et al.*, 2021).

Dukungan keluarga terhadap lanjut usia sangat diperlukan selama lanjut usia tersebut masih mampu memahami makna dukungan tersebut sebagai penyokong kehidupannya, namun seringkali terjadi tidak semua lanjut usia mampu memahami adanya dukungan yang telah diberikan oleh keluarga sehingga menunjukkan rasa tidak puas, menggerutu dan kecewa. Hal ini terjadi karena dukungan yang diberikan tidak cukup, dukungan yang diberikan tidak sesuai dengan kebutuhannya, merasa tidak perlu dibantu. Keadaan ini dapat mengganggu upaya perawatan kesehatan yang seharusnya dilakukan oleh lanjut usia hipertensi.

Dukungan keluarga bisa berupa dukungan emosional merupakan suatu keinginan untuk percaya pada orang lain dan melibatkan kekuatan jasmani sehingga individu menjadi yakin bahwa orang lain dapat memberikan cinta dan kasih sayang kepada dirinya, dukungan Instrumental merupakan dukungan keluarga dalam hal penyediaan sarana prasarana untuk mempermudah atau menolong orang lain termasuk didalamnya memberikan peluang waktu. Dukungan informatif keluarga adalah pemberian informasi kepada anggota keluarga untuk mengatasi masalah kesehatan atau masalah lainnya melalui pemberian nasehat, pengarahan, dan keterangan lain yang dibutuhkan oleh individu yang bersangkutan serta dukungan penilaian berupa peran sosial yang meliputi umpan balik, perbandingan sosial, dan afirmasi atau persetujuan(Friedman, M. M., Bowden, V. R., & Jones, 2014).

SIMPULAN

Dari hasil penelitian menunjukkan bahwa sebagian besar lanjut usia hipertensi selama pandemi COVID-19 mempunyai upaya perawatan kesehatan terutama dalam hal: telah mengurangi makanan yang menyebabkan hipertensi, bekerja tidak terlalu berat, minum obat secara

teratur dan istirahat cukup. Dukungan keluarga yang telah diberikan sebagian besar baik, terutama dalam hal mengingatkan untuk periksa rutin, mengingatkan untuk minum obat, mengingatkan untuk mengurangi garam dan menyarankan untuk selalu berdoa, mengantar periksa, membantu biaya periksa. Ada hubungan antara dukungan keluarga dengan upaya perawatan kesehatan yang dilakukan lanjut usia hipertensi selama pandemi COVID-19. Diharapkan lanjut usia hipertensi penderita agar tetap teratur melakukan upaya perawatan kesehatan khususnya kontrol rutin di pelayanan kesehatan meskipun dalam keadaan pandemi COVID-19 dengan memperhatikan protokol kesehatan sehingga dapat mencegah kemungkinan terjadinya komplikasi. Keluarga selalu memberikan motivasi dan dukungan kepada lanjut usia hipertensi untuk selalu melakukan upaya perawatan kesehatan dan membantu melakukan kontrol rutin di pelayanan kesehatan yang ada.

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Conference Paper

Family Support for Controlling Blood Pressure of Elderly Patients in Health Facilities During the Covid-19 Pandemic in Banjarmasin

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Abstract

At the time of writing, Covid19 cases were steadily increasing in Banjarmasin. Elderly people were afraid to go to the health facilities to control their blood pressure because they were afraid of catching this disease. However, checking blood pressure in the elderly with hypertension is extremely important, and in the absence of qualified medical staff their families need to take on the role. This research is to find the correlation between family support and controlling blood pressure of elderly patients in health facilities. This study was a quantitative research with cross sectional design that used documentation sheets and questionnaires about family support. Selected via purposive sampling, 50 people from families with hypertension were included in this study. The research period was May to July 2020. Data analysis used Chi Square test at α = 0.05. The results indicate that the majority of the respondents have a good family support (56%). For control compliance to health facilities, most respondents selected 'Not Compliant' (40%). The Chi Square analysis showed p value = 0,024 with a significancy 0.05 < 0.05 there is a relationship between family support controlling blood pressure in health facilities. Nurses are expected to participate in the efforts on empower families to improve a health of community especially elderly patients with hypertension.

Keywords: Elderly, Blood Pressure Control, Family Support, Hypertension

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1. Introduction

The Covid-19 (COVID-19) pandemic was declared to a global pandemic after the infections number in worldwide reached more than 121,000 cases [1]. As time goes on, more people are becoming panicked and scared because the number of infected patients continues to increase including in Indonesia. The increase of sufferer number in Indonesia raises concerns in general, where is the effect on society is make it easier to panic, anxiety and stress [2]. An increase in the number of Covid-19 cases of also

occurred in Banjarmasin, so the community in Banjarmasin also experienced anxiety about the transmission of the disease [3].

The group that susceptible to psychological stress during the Covid-19 pandemic are children, the elderly, and health workers [4]. Statistical data of the elderly population by Statistics Indonesia that the elderly population belongs to a group that is susceptible to corona virus infection. Elderly with cardiovascular disease and hypertension have more high risk of being infected and suffering from Covid-19 [5].

The fear that felt by the elderly with hypertension about contracting the disease was causes them to become afraid to go to check themselves to the health facility or just doing a hypertension medication every week. Even though the blood pressure check in elderly suffering from hypertension is a very important thing to do. Regular control to health facilities such as checking blood pressure and following hypertension gymnastics will help to decreased the blood pressure of elderly patients [6]. Regular examination of blood pressure will help the elderly avoid the risk of hypertension complications such as heart disease, stroke and other preventable vascular diseases [7].

The anxiety or stress that felt by have an affected to elderly patients with hypertension. Stress is one of the factors that causing the blood pressure of elderly patients to become unstable [6, 8]. The confession of puskesmas officers in charge of recording patient of hypertension during this Covid 19 pandemic, the schedule of visits of elderly patients with hypertension was decreased. Elderly patients with hypertension are usually scheduled every 2 weeks to check their blood pressure and take hypertension medication. In the fact now, the are many elderly people with hypertension come only 1 time per month for reasons of fear to health center. The compliance of the treatment for hypertension patients is important because hypertension is an incurable disease but the hypertension must always be controlled so as not to cause complications that lead to death [9].

The compliance of elderly patients in routine control requires support from the family. Elderly people who have an experienced of decreased function and have chronic diseases such as hypertension are in desperate need a support and help from others. A study shows there is a link between the level of elderly education, elderly attitudes, affordability of health services and family support with the practice of seniors visiting the elderly posyandu [10]. Family is a main support system for the elderly in maintaining their health. The role of families in elderly care is to look after or care for the elderly, maintain and improve mental status, anticipate socioeconomic changes and provide motivation and facilitate a spritual needs for the elderly [11]. The support of the family will give strength and create an atmosphere belong to each other members of family to a meeting the needs of the family development.

A family has a several forms of support, that are information support, assessment support, instrumental support and emotional support [12]. This is the best preventative strategy to increase a strong family support in helping family members maintain health. A good family will have a positive impact on the development of the elderly, and vice versa [13]. The results of research by Herlinah on the relationship of family support and elderly behavior in hypertension control showed there was a link between emotional support, reward support, information support and family instrumental support and elderly behavior in hypertension control, and found that information support was the dominant factor in elderly behavior in hypertension control [14].

Based on all of the above explanations of the important of family support, researchers are interested to find out about Family Support to Controlling Blood Pressure of Elderly Patients In Health Facilities During The Covid 19 Pandemic

2. Methods and Equipment

2.1. Methods

This research was a quantitative research with a observational research with cross sectional research design. The population in this study was the family of elderly patients (>60 years) who suffered from hypertension in the working area of Puskesmas Teluk Dalam during January – May 2019 of 150 families with hypertension. This study used 50 people to be sample that representatives from families of elderly people with hypertension. The sample in this study was conducted with purposive sampling techniques where the sample criteria had been determined by previous researchers.

This research was conducted from May 2020 to July 2020. The research location is the Teluk Dalam area of Banjarmasin City. Data analysis is done in 2 stages, namely univariate analysis and bivariate analysis. Univariate analysis was conducted on every variable of the study results: demographic data: respondent's age, occupation, gender and education of each participant, family support and compliance of screening elderly hypertension patients. Bivariate analysis was conducted with Chi Square tests to see if there was a relation between family support to elderly patient compliance with health checks.

2.2. Equipment

Researchers used a family supports questionnaires that was validated before. Questionnaires for family support are compiled according to family support theory including emotional support and appreciation for 4 item, material support for 3 item, information support or knowledge and assessment support for 3 items. For family support result used 3 category that were good, moderate, and low [15]. Compliance data will be viewed from the documentation sheet listing visits of elderly patient with hypertension who doing control.

3. Result

3.1. Characteristics of respondents

TABLE 1: Distribution of Frequency Characteristics Family of Elderly Patients with hypertension.

Age	***F***	**%**
20-Dec	12	24%
21-40	23	46%
41-65	10	20%
> 65	5	10%
Total	50	100%
Gender	***F***	**%**
Man	26	52%
Woman	24	48%
Total	50	100%
Education	***F***	**%**
Elementary school (SD)	10	20%
Junior High Scholl (SMP)	19	38%
Senior High School (SMA)	20	40%
Scholars	11	22%
Total	50	100%

Based on the characteristics of respondents in table 1, the majority of respondents aged 21-40 (46%), the majority of respondents were male as many as 26 respondents (52%). The majority of respondents when viewed from the characteristics of the most of high school educated education are 20 respondents (40%).

Table 2: Distribution of Family Support for ederly wit Hypertention.

Family Support	***F***	**%**
Good	28	56%
Moderate	15	30%
Low	7	14%
Total	50	100

3.2. Distribution of family Suport

Result in table 2 appears that family support for elderly people with hypertension is in the category of good support (56%), while the category is moderate (30%), and support is low (14%).

3.3. Distribution of Control data for Elderly Patients with Hypertension

Table 3: Distribution of control compliance of elderly people with hypertension to health facilities

Control Compliance	N	%
Fully Compliant	14	28%
Partial Compliant	16	32%
Not Compliant	20	40%
Total	50	100

Based on result in table 3 it showed that the majority of elderly with hypertension are not compliant to control their blood pressure at health facilities which is 20 people (40%).

3.4. The relationship Family support with elderly patient control compliance

Table 4: Cross-table relationship between family support to control compliance of elderly patients with hypertension to health facilities

Family Support	Control compliance			Total
	Fully Compliant	Partial Compliant	Nont Compliant	
Good	12 (24%)	9 (18%)	7 (14%)	28
Moderate	2 (4%)	25 (10%)	8 (16%)	15
Low	0	2 (4%)	5 (10%)	7
Total	14 (28%)	16(32%)	20(40%)	$\frac{50}{100}$

Chi-square: 0,024; Sig. 0,05 (α = 0,05)

The result from table in table 4 above shows that a good family support keeps patients always to control to health facilities by 24%, family support is good but less compliant in health control as much as 18%, and family support is good but control compliance is not compliant as much as 14%. Sufficient family support but control compliance in the compliant category was 4%, while with a sufficient family support but have a disobedient control was 16%. It also appears that poor family support only leads to 4% less compliant and 10% non-compliant category.

4. Discussion

Based on result in table 1 for Characteristics of respondents obtained the result that the majority of respondents aged is young adults (21-40 years old) as many as 23 people (40%). Families in that age range should have knowledge and be able to provide attention, motivation, and information to clients about things that could lead to worse circumstances. One of research stated if people have older age then the level of a person maturity will be more mature in thinking and working. In terms of public trusted a mature person will be more trusted than a person who is not high enough in maturity [16].

The majority of respondents by gender give a result in table 1 were male 26 (52%). At the time of the study, the number of male respondents whose families had elderly with hypertension was more male than female, this was because there were some female respondents who were unwilling to be respondents when the study was conducted, and usually from families representing one person to the respondent in filling out the questionnaire.

The results in table 1 also show the most education is Senior High School which is 20 people (40%) and Junior High School 19 (38%). The data shows that although there are more in senior high school, but it should not be trivialized that the majority of respondents are also still low educated such as junior high school. In general, the higher a person's education, the easier it is for a person to obtain information. The study before also said that have a lack of public knowledge about health care will affect the utilization of existing service facilities [17].

The previously in Table 2 showed a result that the majority of family support for elderly people with hypertension was in the good support category there were 28 people (56%). The family have an important role because each family member has their own roles and responsibilities and they all have inseparable relationships. The responsibility and need from each other in the family lead to mutual need between

each other. Family members also give an emotional support that helps patients deal with the stress of their illness. When the family provides support to the patient, the patient's condition will improve. Increased family support will be associated with better blood pressure control in hypertensive patients [18]. The support provided by family members shows the care and concern of the family so that hypertensive patients will be motivated to undergo treatment properly and properly [19].

The results showed that the majority of elderly with non-compliant hypertension control the health facilities are 20 people (40%). This disobedience figure is based on the patient's fear of covid-19 pandemic that is currently occurring. Some patients explain that they are afraid to go to the health center or to the hospital because of the risk of transmission of the disease. One of the highest causes of death from Covid-19 is the age factor. Biologically the elderly population will experience an aging process characterized by decreased physical endurance [2]. This can make the body more susceptible to certain diseases. Who added that congenital disease factors such as asthma, diabetes mellitus, or cardiovascular disease also cause a tendency to contract Covid-19 with a poor prognosis. Some of the cardiovascular diseases (heart and blood vessels) in question are hypertension, coronary heart disease, hypertensive heart disease, rheumatic heart disease, heart failure, valve heart disease, peripheral vascular disease, congenital heart disease, cardiomypathy and so on [20].

Based on statistical analysis using chi-square tests on family support for elderly patient control compliance showed a p value of 0.024 with a significant level of 0.05. Since the p value is smaller than 0.05 then Ho is rejected and Ha is accepted. That result mean there is a relationship between family support and control compliance of elderly patients with hypertension.

Family support is quite affected for patients in controlling the disease. Family is one of the main supports for elderly patients with hypertension in maintaining their health. Families play an important role in the care and prevention of health in other family members. Family support has a close relationship with drug compliance so family support is expected to be improved to support the success of hypertension therapy [21].

Good emotional support with a providing care, motivation and attention to elderly families with hypertension is expected to help elderly patients to relieve excessive stress and fear so that the controling of patient to health facilities will run properly.The informational support provided by the family in the delivery of information, knowledge, and correct instructions on hypertension is expected to support the patient's treatment program. One of the reasons of patients experience failure in controlling hypertension is

due to lack of compliance levels. Patient control for the disease will provide the effective results if educated about knowledge, ideas, thoughts and feelings against hypertension, resulting in efficient blood pressure control [22, 23]. The task is expected to be carried out by the family at home as a party that has more time with the patient.

Have a good material or financial support in a family will also have an impact on patient compliance to doing health control in health facilities. Financial hardship can lead to unstableness and fear in a family [23]. Financial balance is needed to treatment hypertension programs are sustainable and financial balance is necessary to maintain the therapy that is being carried out. In health control is indispensable family support, because the family acts as a primary group that acts as a reminder [23, 24].

The assessment support that required in here is that families are expected to participate directly in encouraging patients to adhere to hypertension control to health facilities. Families also give a help to decide what foods is good to consume, appropriate physical activity and how health is a priority in the family [18]. Families play an important role in encouraging and strengthening patient behavior in the compliance of elderly patients to perform Health control.

5. Conclusion

Based on the results of the research, it can be given the conclusion that there is a relationship between family support with health controls of elderly patients in conducting health control to health facilities. Family support is needed by elderly patients to always routinely perform blood pressure control in health facilities during the pandemic as it is today. Health workers, especially nurses, are expected to participate in family empowerment efforts to improve health care efforts, especially elderly patients with hypertension.

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Conflict of Interest

The authors have no conflict of interest to declare on.

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Relationship between Knowledge and Family Support regarding Hypertension with Blood Pressure Control in Elderly

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ABSTRACT

Background: Hypertension is one of the degenerative diseases that have frequently been found among the group of elderly. If hypertension goes uncontrolled, then it might escalate and cause complication. The level of knowledge for both of patients and their families in terms of preventive actions toward hypertension complication is expected to be able to control blood pressure. Among the hypertension patients, the role of family support is very important in order to maintain and to control that the blood pressure will not increase and to return it to the normal state. In relation to this background, the objective in conducting this study was to analyze the relationship between knowledge and family support regarding hypertension with blood pressure control among the elderly with hypertension in the Sangkrah Center of Public Health, City of Surakarta.
Subjects and Method: This was an analytic observational study with cross sectional design. This study was conducted in Sangkrah Community Health Center in the City of Surakarta on November 2016. A total sample of 147 elderly were selected for this study by purposive sampling. The dependent variables in this study was blood pressure and was measured by sphygnomanometer. The independent variables were knowledge and family support and were collected by a set of questionnaire. The data analyzed by logistic regression.
Results: Family knowledge (OR= 0.38; 95% CI= 0.13 to 1.08; p= 0.070) increased the likelihood of blood pressure control. Elderly who came from family with good knowledge regarding hypertension had 0.4 times better blood pressure control in comparison to those who came from family with poor knowledge regarding hypertension. Family support (OR= 0.43; 95% CI= 0.18 to 1.02; p= 0.046) increased the likelihood of blood pressure control. Elderly with good family support had 0.4 times better blood pressure than those who had poor family support.
Conclusion: Family knowledge and family support increase the probability of blood pressure control among elderly with hypertension.

Keywords: knowledge, family support, blood pressure control, elderly

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BACKGROUND

Hypertension among elderly is defined as a persistent blood pressure in which the systole pressure is above 160 mmHg and the diastole pressure is equal to 90 mmHg (Sheps, 2005). Hypertension still becomes a health problem among elderly. The results of rapid development nowadays have been able to improve their life expectation rate and, as a result, this increasing life expectation rate is often followed by the increasing degenerative diseases and other health problems among this group of people. Hypertension itself is one of the most frequently found diseases among elderly (Abdullah, 2005). Hypertension can be a serious health problem in the society; if hypertension is not getting controlled, then it will escalate and cause dangerous complications (Gunawan, 2001).

Based on the data of Basic Health Research (Riskesdas, 2013), the prevalence of hypertension in Indonesia has been equal to 26.50% and the coverage and hypertension diagnosis by medical staff has been equal to 36.80% or, in other words, most of hypertension cases in the society has not been diagnosed (63.20%). Furthermore, based on the data of the Office of Health for the Province of Central Java (2014), the number of essential hypertension patients has been 65,525 cases (essential hypertension). These figures show that the pattern of degenerative disease should be given serious attention by all parties. In Sangkrah Health Public Center, essential hypertension occupied the first place from 20 patient visits in 2015 and the number of hypertension patients at that year was 7,759 people.

Both the level of family knowledge and of patient knowledge in terms of taking preventive action toward hypertension complication is expected to control the blood pressure and some of these actions are decreasing the amount of salt consumption, decreasing the amount of fat consumption, performing regular exercise, not smoking and not drinking liquors (Margatan A., 2005).

Among hypertension patients, family support has a very important role in maintaining and controlling the blood pressure and in returning it to the normal state. In addition, blood pressure measurement might also be conducted by the family who has learned about hypertension from medical staff (Awotidebel, 2014).

According to Wijaya (2010), the most important aspects in preventing hypertension among elderly are life style change, low salt diet, body weight loss among people with obesity and life style modification. These aspects should be given top priority as the first step in conducting hypertension medication.

From a preliminary study conducted at the Working Region of Sangkrah Community health center, the researchers found that 1,081 elderly who performed their medical checkup in this community health center on 2015 suffered from hypertension. The habit of these elderly was consuming salty food; if their food was less salty then it would be tasteless and this made the elderly lost their appetite. For them, salty food was tasty and more enjoyable to eat. This habit was also found among all family members. In other words, family support toward the efforts of undergoing low salt diet had been low. This habit and culture of consuming salt becomes one of the obstacles in conducting and complying to the low salt diet among elderly with hypertension.

Looking at the background, the purpose of the study was analyzing the relationship between knowledge regarding hypertension and blood pressure control among elderly with hypertension in Sangkrah Community health center, City of Surakarta.

SUBJECTS AND METHOD

This study was an observational analytical research with cross sectional design. The researchers had conducted a study in Sangkrah Community health center in the City of Surakarta with the following ethical clearance: 876/ X/ HREC/ 2016. The study was conducted by gathering the primary data through the distribution of a questionnaire regarding hypertension knowledge and family support toward elderly patients who afforded their treatment in Sangkrah Community health center. The total subjects in this study were 147 elderly patients. The population in this study was all elderly with hypertension who visited the community health center. The population of elderly

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with hypertension on 2015 was 1,081 people. The sample was gathered from this population based on the criteria of inclusion and exclusion.

In this study, the researchers implemented purposive sampling technique for gathering the sample (Dahlan M, 2009).

The criteria of inclusion were as follows:

1. Elderly with hypertension who had regular treatment in Sangkrah Community health center within the last three months.
2. Elderly who had been 60 years old and above.
3. Families who approved the inform consent.

On the other hand, the criteria of exclusion were as follows:

1. Elderly with Diabetes mellitus and heart disease.
2. Hypertension patients who had been treated with the same single medication (Captopril).

Then, the number of sample in this study was attained by using the calculation formula of cross-sectional study as follows (Murti B, 2013):

$$n = \frac{Z^2_{1-\alpha/2}.p.q}{d^2}$$

$$n = \frac{(1.96)^2.0.09.\ 0.91}{0.05^2}$$

n =125

In order to avoid dropout, the researchers added 10.00% sample more so that the total sample became 138 people.

Note:

n = sample size
p = prevalence of dependent variable on the population (9.00%)
q = 1 - p
$Z1-_{\alpha/2}$ = Z statistics, alpha standardized derivatives 0.05
= 1.96
d = delta, absolute precision or margin of errors desired in both sides of propositions (5.00%)

Based on the calculation above, the researchers attained 138 elderly as the sample size for the study.

Operational Definition

1) Family knowledge regarding hypertension refers to family understanding about what they have learned in relation to hypertension and this includes definition of hypertension, definition of hypertension complication, hypertension complication, signs and symptoms of complications and factors of complication risks.

Measurement: questionnaire with Guttman scale that contains 2 alternatives (true false).

Scale: nominal

Results:

Good knowledge: 60.00% - 100.00%

Poor knowledge: ≤ 60.00%

Instrument: knowledge test items-questionnaire.

2) Family support refers to the involvement of a family member (child) in motivating the other family member (elderly) to attend hypertension treatment and medication programs.

a. Emotional Support refers to the support provided by a family in the form of attention, affection and love toward elderly with hypertension. Measurement: questionnaire regarding family emotional support in the form of Likert scale namely always, often, seldom and never with 10 questions.

b. Appreciation Support refers to the support provided by a family in the form of appreciation, listening and conversation that involves elderly. Measurement: questionnaire regarding family emotional support in the form of Likert scale namely always, often, seldom and never with 10 questions.

c. Informational Support refers to the support provided by a family in the form of information distribution regarding hypertension toward elderly with hypertension. Measurement: questionnaire regarding family information support in the form of Likert scale namely always, often, seldom and never with 14 questions.
d. Instrumental Support refers to the support provided by a family in the form of assistance, efforts, time and cost in controlling the elderly' health. Measurement: questionnaire regarding family instrumental support in the form of Likert scale namely always, often, seldom and never with 10 questions.
Measurement results:
Good = 33-78
Poor = 18-32
Scale: nominal
Instrument: questionnaire
3) Blood Pressure Control refers to systole and diastole pressure of elderly with hypertension, usually ≤150/90 mmHg.
Measurement: sphygnomanometer operation
Scale: nominal

Table 1. Measurement results

Classification	Systole Pressure (mmHg)	Diastole Pressure (mmHg)
Controlled	130-140	90
Uncontrolled	150-160	90-100

The instruments that the researchers implemented in the study were questionnaire and sphygnomanometer. The questionnaire was distributed in order to gather the data on respondents' characteristics, respondents' knowledge in relation to hypertension and family support.

For the respondents' identity, the data that the researchers gathered were name, sex, age, education and occupation. The data regarding hypertension would be elaborated as follows.
a. Research instrument for measuring knowledge regarding hypertension
Knowledge

- Definition of hypertension : 1,2
- Definition of complication hypertension : 3
- Hypertension complication : 5, 6
- Signs and symptoms of complication : 8, 9, 10
- Signs and symptoms of hypertension : 11, 12
- Factors of complication risks : 13, 14, 15, 16 17, 18

Results:
Good knowledge: 60 %-100 %
Poor knowledge: ≤ 60
b. Questionnaire of family support assessment
The questionnaire that had been distributed in order to assess the family support in this study was modified from the questionnaire developed by Yenni (2011) regarding the relationship between family support and behaviors of elderly with hypertension in controlling their health. The questionnaire in this study involved 36 questions in relation to the family and these questions included emotional support, appreciative support, informational support and instrumental support. The form of statement that had been used was Likert scale with positive and negative statements.

Every question had four alternatives with following criteria: 3= always, 2= often, 1= sometimes and 0= never for the positive statements and 0= never, 1= often, 2= sometimes and 3= never for the negative statements. Respondents answered one of the alternatives by putting (√) on the available columns.
1) Emotional support

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Emotional support had 8 statements. The positive statements were provided in the statement number 1, 2, 3, 4, 5, 7 and 8. On the contrary, the negative statement was found in the statement number 6.

2) Appreciative support

Appreciative support had 8 statements. The positive statements were provided in the statement number 10, 11, 12, 14 and 15. On the contrary, the negative statements were provided in the statement number 9, 13 and 16.

3) Informational support

Informational support had 13 statements and all of these statements were positive. These positive statements were provided from number 17 until 29.

4) Instrumental support

Instrumental support had 7 statements. The positive statements were provided in the statement number 30, 31, 32, 34, 35 and 36. On the contrary, the negative statement was provided in the statement number 33.

Instrument test was conducted by the researchers toward 40 respondents who were in Sangkrah Community health center. From the results of validity test for the questionnaire of knowledge questions, the researcher found that 6 of 18 statements had r-count that had been smaller than r-table (r= 0.31), namely the statement number 3, 4, 6, 9, 10 and 14 (attached). Thereby, the researchers might conclude that from 18 statements there had been 12 valid statements and the remaining 6 statements that had been invalid were eliminated. These valid statements then would be sent into reliability test. The results of reliability test showed r alpha = 0.60. These results implied that the statements had been reliable bcause r alpha > r table.

In the results of validity test for the questionnaire of family support test items, the researchers found that 8 of 36 statements had r count that had been smaller than r table (r = 0.31) namely the statement number 1, 10, 11, 14, 18, 26, 30 and 36 (attached). Therefore, the researchers might conclude that from 36 statements there had been 28 valid statements and the remaining 8 statements that had been invalid were eliminated. These valid statements then were sent into reliability test. The results of reliability test showed r alpha= 0.70. These results implied that these statements had been reliable because r alpha > r table.

The bivariate and multivariate data analysis was conducted in order to identify the inter-relationship variable by means of statistical test. The statistical tests that would be implemented were Chi Square with rate of significance 95% and α 0.05, mean and logistic regression model significance test. This logistic regression model was implemented because the data that had been attained were categorical. The analysis toward the data that had been gathered would be processed by SPSS (Statistical Program for Social Science) version 16.0 for Windows.

Ninety two respondents (62.60%) were female, while the remaining 55 respondents (37.40%) were male; in other words, most of the respondents in this study were female. Then, 147 respondents (100.00%) were categorized into the early elderly. 92 respondents (62.60%) had high educational level, while the remaining 55 respondents (37.40%) had low educational level. 126 respondents (85.70%) had families with good background knowledge of hypertension, while the remaining 21 respondents (14.30%) had families with poor background knowledge of hypertension.

Furthermore, 90 respondents (61. 20%) had good family support, while the remaining 57 respondents (38.80%) had poor family support. Last but not the least, 120 respondents (81.60%) had uncontroll-

ed blood pressure while the remaining 27 respondents (18.40%) had controlled blood pressure.

RESULTS

1. Bivariate Analysis

Table 2. Relationship between family knowledge regarding hypertension and blood pressure on elderly patients with hypertension

Knowledge	Blood pressure		Total	p
	High	Low		
Good	106	20	126	
Poor	14	7	21	0.056
Total	120	27	147	

From the table, the researchers might view the results of statistical tests carried out by Chi Square test with SPSS 16 program. From these results, the researchers find that the significance probability value or p = 0.056. Because p > 0.05, the researchers conclude that they do not find any relationship between knowledge level regarding hypertension and elderly' blood pressure.

Table 3. Relationship between family support and blood pressure among eldely patients with hypertension

Family Support	Blood pressure		Total	p
	High	Low		
Good	78	12	90	
Poor	42	15	57	0.048
Total	120	27	147	

From the above table, the researchers might view the results of statistical tests by SPSS 16 and the researchers find that the significance probability value or p = 0.048. Because p < 0.05, the researchers conclude that they find a relationship between family support and elderly patients' blood pressure.

2. Multivariate Analysis

The blood pressure of elderly patients who come from the family with good knowledge is approximately 0.3 times better than that of elderly patients who come from family with poor knowledge and there is not any significant relationship between family knowledge and blood pressure of elderly patients with hypertension (OR= 0.38; 95% CI= 0.13 to 1.08; p= 0.070).

Table 4. Relationship between family knowledge regarding hypertension and family support regarding blood pressure among elderly patients with hypertension

Variable	OR / Exp (B)	p	95% CI	
			Upper limit	Lower limit
Knowledge	0.38	0.070	0.13	1.08
Family support	0.43	0.046	0.18	1.02
Constant	0.64	0.784		

Then, the blood pressure of elderly patients who have good family support is approxymately 0.4 better than that of elderly patients who have poor family support and there is a significant relationship between family support and blood pressure of elderly patients with hypertension (OR= 0.43; 95% CI= 0.18 to 1.02; p= 0.046).

DISCUSSION

This study was conducted with measurement toward family knowledge level regarding hypertension and family support toward 147 respondents. From the results of the study, the researchers found that 126 respondents (85.70%) had family with good knowledge. Such good knowledge that the family of these respondents had were attained by multiple information regarding definition, causing factors, symptoms, complication and hypertension preventive efforts. They found these aspects from medical staff, other people and surrounding environment. The knowledge itself might also be attained through the facts that they read or they listened to from communication medium such as newspaper, magazines, television, radio and alike.

Based on the data analysis by Chi Square with p= 0.056, the researchers found that there was not any relationship between

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parents' knowledge level regarding hypertension and elderly blood pressure. The reason might be that poor knowledge background and habit would be followed by poor action in preventing the occurrence of hypertension among the family members.

Knowledge has been an important domain in establishing overt behavior of an individual. Based on results of studies and experiences, behavior that has been based on knowledge will last longer than the one that has not been based on knowledge.

This study is not in line with that of Nugraha (2014), which states that there is a relationship between family knowledge level and complication preventing acts among hypertension patients. This difference might be caused by the fact that the sample in the study by Nugraha has been hypertension patients instead of elderly with hypertension.

In the same time, this study is also not in line with that of Godfrey, Iyalomhe & Sarah (2010) which states that hypertension is related to knowledge, attitude, and lifestyle among the patients.

Most experts state that knowledge and attitude provide less support toward the prevention of hypertension. If an individual has good knowledge regarding health, then the individual will try avoiding or minimizing anything that might cause a disease. At least the individual will try displaying supporting behavior in order to improve the degree of his or her personal health.

Based on the data analysis toward family support, the researcher found that 90 (61.20%) elderly patients had good family support. The results of Chi Square test with p= 0.048 showed that there was a relationship between family support and elderly patients' blood pressure control. Similarly to the results of a study by Zulfitri (2006), this study found a relationship between family support and behaviors of elderly patients with hypertension in controlling their health so that elderly patients with hypertension had good behaviors in maintaining their health and they were expected not to suffer from worse condition. The results of this study were also similar to those by Setyaningrum (2009) which stated that 17 (51.50%) respondents had moderate family support. The researchers found that most of the family members only provided general suggestion toward the respondents without providing any responsive feedback in order to solve the problems that the respondents had.

Setiadi (2008) stated that family support consists of instrumental support, informational support, appreciative support and emotional support. These components might support the respondents in improving their health. Family support might decrease mortality so that the patients will be easier to recover themselves from their disease and to improve their emotional health. The positive influence of family support might become an adjustment toward the events in their stressful life (Setiadi, 2008).

As having been stated by Friedman, Bowden and Jones (2003), family support has been the most significant source of assistance for family members. Based on that statement, the researchers might state that elderly with hypertension who have good family support will also display good behaviors in maintaining their health. This statement is also supported by McMurray (2003), who stated that family support belongs to the strengthening factors that might influence the lifestyle and the behavior of an individual so that these factors might impact the quality of his or her life and health.

Family role is also expected to be able to provide support and motivation toward

hypertension patients in optimizing their life such as consuming healthy food, performing diet and routinely checking blood pressure. 120 (81.60%) elderly patients had uncontrolled blood pressure, while the remaining 27 (18.40%) elderly patients had controlled blood pressure. The older an individual, the higher his or her pressure will be; therefore, elderly people tend to have higher blood pressure than younger people.

When the researchers performed the blood pressure measurement, the respondents displayed various conditions; some of them were relaxed and the others had just finished their activities since they were sweating. However, the remaining respondents seemed to be anxious. In addition to hypertension, these various conditions also influence the results of blood pressure measurement.

Most of the respondents suffered from hypertension for 5 to 10 years. This means that most of the respondents have been aware to afford the treatment in the community health center. Some people do not care about their hypertension and they consider that high blood pressure is just common. When an individual has been diagnosed having hypertension, he or she should drink the medicine for the rest of his or her life and they should regularly check up their health every ten days in a row. The respondents who have been suffering from hypertension for 5 until 10 years are the ones who have been aware that hypertension should not be ignored; therefore, they have medical checkup in this community health center in order to attain information regarding hypertension from medical staff.

The difficulty in conducting this study is that not all respondents are able to read and write so that they should be accompanied when they complete the questionnaire that has been provided by the researchers.

Based on the results and the discussions, the researchers might conclude that:

1. There is not any significant relationship between family knowledge regarding hypertension and blood pressure of elderly patients with hypertension.
2. There is significant relationship between family support and blood pressure of elderly patients with hypertension.
3. There is an insignificant relationship between family knowledge regarding hypertension and blood pressure of elderly patients' with hypertension and there is a more significant relationship between family support and blood pressure of elderly patients with hypertension.

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Original Article

Analysis Relationship Family Support and Health Cadre with Elderly Hypertension Practice in Controlling Health at Primary Health Care Mranggen Demak

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Primary Health Care of Mraggen Demak

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Practice; Elderly; Health Control; Hypertension

Abstract

Hypertension is a major risk factor for cardiovascular disease which is the leading cause of death in Indonesia. Data Research Department of Health in 2005, showed hypertension and cardiovascular disease is still quite high and even tends to increase with the lifestyle that much of the behavior of healthy and clean life, high cost of treatment of hypertension, erroneous perception of the public accompanied by a lack of safety facilities hypertension , Hypertension is actually a disease that can be prevented if the risk factors can be controlled and healthy behaviors (healthy behavior) which practices or activities related to efforts to maintain, control and improve health. Data from Demak district health department, the incidence of hypertension has increased within the last three years. The aim of this study was to determine the relationship of family support and cadres with elderly Hypertension practices in controlling health in Puskesmas Mranggen, Demak by using a cross-sectional study with a quantitative approach. The sample size for a quantitative approach is 285 respondents (total sampling). The data were analyzed using univariate, bivariate with chi-square. The results showed an association between family support for elderly people who suffer from hypertension with the practice of elderly hypertension in controlling health (p = 0.048), there is a relationship between support for health workers to the elderly who suffer from hypertension with Practice elderly hypertension in controlling health (p = 0.049). Advice to the puskesmas officers in order to improve the quality of health care, home visits, provide health education particularly on controlling health benefits for elderly hypertension and cross-sectoral cooperation in the implementation of an integrated program of coaching post (posbindu) elderly.

INTRODUCTION

Hypertension is a major risk factor for cardiovascular disease which is the leading cause of death in Indonesia. Data Research Department of Health in 2005, showed hypertension and cardiovascular disease is still quite high and even tends to increase with the lifestyle that is far from healthy and hygienic behavior, high cost of treatment of hypertension, accompanied by a lack of safety facilities hypertension. If

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left untreated hypertension, the blood pressure will continue to increase gradually, resulting in the excessive workload of the heart.[1] The excessive workload of the heart that will someday result in serious damage to the blood vessels and organs such as the heart, kidneys, eyes, and even rupture of capillaries in the brain, or better known by the name of a stroke.

Hypertension, also known as a heterogeneous group of diseases, which can affect anyone of various age groups, the elderly are the age group most susceptible to hypertension, as well as the social economy. The tendency of changing lifestyles as a result of urbanization, modernization, and globalization led to a number of risk factors that may increase morbidity hypertension.[2] 38.8% of the elderly who suffer from hypertension, only 50% were treated regularly (controlled hypertension) and only half of the control well. That is, of all people with hypertension in Indonesia that is well-controlled amount below 10%.[3,4] It is easy to understand because it does not give symptoms of hypertension. Such conditions appropriate to the nature of hypertension as the silent killer (silent killers), because many people do not pay attention to a disease that is sometimes taken lightly by them, without knowing if the disease is dangerous from a variety of disorders that more fatal for example, abnormal blood vessels, heart (cardiovascular) and kidney problems and many patients who come for treatment when already severe vascular damage.[5]

Hypertension is actually a disease that can be prevented if the risk factors can be controlled and healthy behaviors (healthy behavior) that the conduct or activities related to efforts to maintain and improve health. Those efforts include monitoring blood pressure regularly, healthy living programs without smoke, increased physical activity/exercise, a healthy diet with caloric balance through the consumption of high-fiber, low-fat and low-salt, it is a combination of independent efforts by individuals / communities and supported by the existing health care program and should be done as early as possible, in hypertensive patients require regular maintenance in order to know their blood pressure. Patients with hypertension should perform routine checks that hypertension in misery can be controlled well.[2]

Data from Demak district health offices, the incidence of hypertension has increased within the last three years, in 2011 was 889 cases (13.6%), the year 2012 amounted to 1 235 cases (16.5%) and the year 2013 by 2173 (17, 8%) and ranked first 10 elderly diseases. Data in Demak Mranggen health center in the last 3 years, in 2011 was 935 cases (12%), in 2012 as many as 1150 cases (14.5%) and in 2013 amounted to 1 325 cases (16.3%) and is the second highest after joint disease of 1570 cases (21%). Based on reporting records of Posyandu elderly Source Healthy Kale village, turns hypertension in the elderly was ranked first in the amount of 64% (130 people), joint disease 20% (41 people) of 203 elderly who are registered as members of Posyandu. Of hypertensive patients is only 32% (42 people) who carry out regular inspections of each month, the rest do not do on a regular basis.[1]

From the report the practice of nursing care performed S1 students of Nursing, the University of Muhammadiyah Semarang in Puskesmas Mranggen in January-March 2014, of 318 elderly with hypertension, 145 (46%) perform a routine check on health services, the rest do not conduct regular inspections, it is because the reason does not have money for treatment, felt bad for being a burden his family, no escort because they live alone, considers the disease is a mild disease that does not need to be checked regularly.

In a society often found misconceptions about the illness. Many members of the

public when they are already sick can not work or is not able to get out of bed. Communities affected by the disease but do not feel pain (disease but no illness) will not act anything against the disease, but if they are affected by the disease and also feel pain then there will be a business and kinds of behavior, ie no action (no action), acting treat yourself (self-treatment) and seek traditional treatment started (traditional remedy), up to modern medical facilities organized by practitioners (private modern medicine).[6] Someone will take preventive action is influenced by demographic variables (education, knowledge, age, and occupation) of individuals as well as for instructions to behave (cues to action) alleged right to start the process of behavior, which is derived from information or advice on the health problems of hypertension. Health behaviors someone starts that behavior is a function of one's intention to act (behavior intention), social support from family and the surrounding community (social support), lack of access to health services (accessibility of health care), personal autonomy of people concerned in terms of taking the actions or decisions (personal autonomy) as well as the situation allows it to act (action situation). [7]

METHODS

This type of research is explanatory research using a cross-sectional approach. The population in this study were all elderly with hypertension, aged ≥ 60 years or older and live in the region Puskesmas Mranggen Demak between the months of June to December 2014. The sample size in this study is total sampling that all the elderly who suffer from hypertension, aged ≥ 60 years or older and live in the region Puskesmas Mranggen Demak, as many as 285 people.

Measuring tool used to obtain quantitative data in this study is a questionnaire in the form of written questions to uncover the independent and dependent variables. To prove the validity of the questionnaire used in this study has been tested for validity and reliability, the trial questionnaires in Puskesmas Karangawen Demak with the number of respondents 30 elderly. Validity test conducted with product moment correlation test, while the reliability test using Cronbach alpha statistic test.

Independent variables: family support, and support health workers while the dependent variable was the practice in controlling hypertension elderly health. Once the data is collected, then processed by examining the questionnaire, editing, coding, scoring and tabulating the data analyzed. Data analysis aimed to determine the relationship between independent variables with the dependent variable. In addition, the analysis was also used to test the research hypothesis. Analysis techniques used include: univariate, is used to analyze the variables - variables that exist in descriptive by calculating the frequency distribution and proportion. The bivariate analysis consists of: (1) cross tabulation analysis is used to summarize, determine the distribution of data and can also be used to analyze descriptively. (2) The comparative analysis (correlation test) as the basis for testing the research hypothesis. This analysis using Chi-Square test with $\alpha = 0.05$.

RESULTS

Practice in controlling health Elderly

Average practices committed by the respondent in controlling health was 5.47 ± 1.721 with a minimum of 2 and a maximum value of 8. Practice elderly hypertension in controlling health have largely been good, that is 69.1% and less by 30.9 %, but there are about 59.6% do not exercise regularly, 44.2% were still smoking and a diet as recommended by 35.1% and 33.7% still consume alcoholic beverages.

Family Support

Average family support against the respondent was 9.04 ± 1.959 with a minimum of 2 and a maximum value of 11. The highest level of support from family is good support and the support of 88.1% less as much as 11.9%. Most of the respondents have the support of the family, but in practice control the health of the respondents did not receive full support from the family, it is pointed out there are still 26.3% of families do not take the time to the respondents, 24.9% of respondents did not want to deliver to check the health stewardship , 21.8% of families do not support all the activities of the respondents and 18.6% of families do not bear all the costs of treatment responders.

Support Health Cadre

Average support cadres of the respondents were 2.86 ± 2.152 with a minimum value of 1 and a maximum of 7. The level of support from most health cadres is good support at 51.2% and less support as much as 48.8%. Respondents who have the support of a cadre of good health and a lack of support is quite balanced, this is indicated approximately 58.2% health worker gives advice about the disease that affects the elderly, 55.1% of health volunteers reminded to conduct periodic examinations, 53 , 3% taught how to care and 52.3% were advised to rest, while support health volunteers demonstrated less than 87% volunteer health worker to deliver health services, 79.3% did not teach gymnastics, and 67.4% are not health workers organize Posyandu elderly.

From the analysis of the relationship between health workers to support the elderly who suffer from hypertension in the elderly hypertension Practice in controlling health showed that there were 98 (75.4%) of respondents who have less support health cadres to practice good health control.

While respondents who have the support of good health cadres there are 99 (63.9%) who practice good health control, and that there are as many as 32 (24.6%) of respondents who have less support health cadres to practice controlling ill health. While respondents who have the support of good health cadres there were 56 (36.1%) who practice controlling ill health. The results of the statistical test Chi-Square test obtained by value p = 0,049 with an error rate of 5%, it can be concluded that there is a relationship between health workers to support the elderly who suffer from hypertension in the elderly hypertension Practice in controlling health

DISCUSSION

The support given by the family of the elderly with hypertension who control practices in good health, is they have been warned to want to check, reminded to take his medication regularly, delivering check, help with the cost check, remind to reduce salt, adequate rest, quitting smoking, advise many worships and pray, while the family of advanced age is not doing well health control practices revealed that they have made efforts reminded to check, recommends to check, eat right, do a heavy work

The size of the support provided by the family is also closely linked to the family's understanding of the perception of vulnerability, perceived severity, perceived benefits, perceived barriers, and access to health services.

From the analysis of the relationship between family support for elderly people who suffer from hypertension in elderly hypertensive practices in controlling health showed that there were 18 (52.9%) of respondents who have less family support practices with good control of their health. While respondents who have good family support there were 179 (71.3%) who practice good health control, and that there are as many as 16 (47.1%) of respondents

who have less family support practice controlling ill health. While respondents who have good family support there were 72 (28.7%) who practice controlling ill health.

The results of the statistical test Chi-Square test obtained by value p = 0,048 with an error rate of 5%, it can be concluded that there is a relationship between family support for elderly people who suffer from hypertension in elderly hypertensive practices in controlling health.

Humans as social beings can not live alone without the help of others. Physical needs (clothing, food, housing), social needs (association, recognition, school, work) and psychological needs including curiosity, a sense of security, feelings of religiosity, not be fulfilled without the help of others.[8] Especially if the person is facing problems, whether mild or severe. At moments like that, someone would seek social support from the people around him, so he feels valued, cared for and loved.

Social support can be regarded as something beneficial situation, providing assistance for individuals obtained from another person who can be trusted and as the availability and willingness of those means, which can be trusted to assist, encourage, receive, and keep individual. From these circumstances, the individual will know that other people pay attention, respect, and love. The family is a source of social support for family relationships to create a relationship of mutual trust. The individual as a member of the family will make the family as a collection of hope, a story, ask, and issuing complaints when the individual is experiencing problems.[9] According to Green's theory that social support is one factor that strengthens a person to perform a specific behavior.[7]

Family support can include emotional support, instrumental, information, and assessments.[10] Emotional support involves the physical strength and the desire to believe in others so that the individuals concerned became convinced that others are able to provide love and affection to him, support Instrumental, such as the provision of means to facilitate or help others as an example is the equipment, supplies, and Other supporting facilities and including providing a timely opportunity. Informative support for the provision of information to resolve personal problems, namely the provision of advice, guidance, and other information required by the individuals concerned as well as support for assessment in the form of social roles that include feedback, social comparison, and affirmation (approval).

Giving support to the elderly requires an understanding of the family about the perception of vulnerability, perceived severity, perceived benefits, perceived barriers, access to health services and presence (availability) as well as the accuracy / appropriateness (adequacy) of such assistance for the elderly, so as not to cause social support given misunderstood and not well targeted. If the elderly (for various reasons) are no longer able to understand the significance of social support, it is necessary not only social support or maintenance service but socially (social care) completely.[11] Support has been done by the families in this study were mostly families have made efforts observing condition/disease state, suggesting to pray, remind to always obey the doctor's advice, suggesting to adequate rest, and provide information about the disease.

Results cross check with the family of respondents indicated that the majority of families of respondents have understood recurrence risk factors, complications may occur, along with the health benefits of exercise control obstacles that may occur as well as access gained in an effort to control the practice of health of elderly hypertensive. The support provided by the family tried to remind to want to check, reminded to take his medication regularly,

delivering the check, help with the cost check, remind to reduce salt, adequate rest, smoking cessation, suggesting to many worships and pray. This suggests that with good family support would encourage elderly hypertensive to practice good health control anyway.

Social support has an important role to prevent health threats,[10] high social support would make the elderly more optimistic in the face of today's life and future, more skilled in meeting the psychological needs and have a higher system, as well as lower levels of anxiety, enhance interpersonal skills, have the ability to achieve what they want and be able to guide the elderly to adapt to stress that health problems are being encountered can be resolved properly and is able to perform optimal health control practices.

Social support for the elderly is very necessary for the elderly themselves are still able to understand the meaning of social support such as a supporter/sustainer of life, but the life of the elderly is often found that not all elderly people are able to understand the social support from others, so even though he had received social support but still Just indicate dissatisfaction, which is shown by way grumble, disappointed, upset and so forth. This can happen because of the support provided is not sufficient, the elderly feel no need to be assisted or worry too much emotionally that do not pay attention to the support provided, the support provided is not in accordance with what is required of elderly, a source of support for setting a bad example for the elderly, as do suggest unhealthy behaviors and to maintain or support the elderly in doing anything it wants. This situation can disrupt health control practices should be done by the elderly and causes the elderly to become dependent on others.

In this study support given by health workers include: remind the elderly to carry out checks at regular intervals, suggesting to many breaks, dropping to health services, provide advice about the disease, the elderly Posyandu organize, teach gymnastics elderly and teach how to care. There is some support for health cadres perceived by the respondents is not optimal they are escorted to health care, teaching gymnastics elderly and organizing Posyandu, this is due to the limited number of health volunteers are active in every village, most of the implementation of Posyandu still join the Posyandu toddler,

While the results of cross-checking with the families of the respondents about the support given to elderly hypertensive cadres showed the majority of respondents said that family health volunteers have held Posyandu, gymnastics, giving advice about the disease, and taught to live a healthy life. Meanwhile, in the opinion of its own health workers, they have been warned to check, suggesting to many breaks, advise, encourage and teach you how to care to posyandu.

Thus, the better support health volunteers to elderly hypertension will increase efforts to elderly hypertension to control their health and supported by a good understanding of the factors that are at risk of recurrence, complications may occur, the benefits to control health along with the obstacles that may occur and access gained in an effort to control the practice of health of elderly hypertension is the ability to provide support to elderly hypertensive to practice health control will also increase.

CONCLUSION

From the results of the study showed that 69.1% of respondents have good health control practices and the remaining 30.9% had less health control practices, among others: there are about 59.6% do not exercise regularly, 44.2% still smoke and not on a diet as recommended by 35.1% and 33.7% still consume alcoholic beverages. 88.1% of respondents get good

family support and the remaining 11.9% have less family support. 51.2% of respondents have the support of good health cadres and the remaining 48.8% less to get the support of the health cadres. 71.9% of respondents get access to good health services and 28.1% had less access to health services. There is a relationship between family support for elderly people who suffer from hypertension in elderly hypertensive practices in controlling health. Less family support, health management practices will be less as well. There is a relationship between health cadre support for elderly people who suffer from hypertension in elderly hypertension practices in controlling health. Support cadre ill health, health management practices will be less as well.

CONFLICTS OF INTEREST

The author declare that none of her had any conflict of interests.

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HUBUNGAN DUKUNGAN KELUARGA PADA PASIEN DENGAN TEKANAN DARAH TINGGI DALAM PENGENDALIAN HIPERTENSI

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ABSTRACT : RELATIONSHIP OF FAMILY SUPPORT IN PATIENTS WITH HIGH BLOOD PRESSURE IN CONTROLLING HYPERTENSION

BACKGROUND : Based on data from the Bandar Lampung City Health Office in 2018, the highest data on hypertension events were in Puskesmas Panjang as many as 12,142 people, Kemiling Health Center as many as 10,706 people, Way Halim Health Center as many as 10,049 people, Sukaraja Health Center 9,272 people, Tanjung Karang Health Center 9,940 people City of Bandar Lampung, 2018).
PURPOSE : to determine the relationship of family support in patients with high blood pressure in controlling hypertension in the Work Area of Panjang Bandar Lampung in 2019.
METHODS : This type of research is quantitative. Analytical Survey Design with cross sectional approach. The population was hypertension sufferers who participated in Prolanis activities in the Working Area of the Bandar Lampung Long Health Center in 2019 by 106 people, a sample of 106 respondents who experienced hypertension, sampling in the accidental sampling study. Statistical tests using the chi square test.
Results : showthere is a relationship of family support in patients with high blood pressure in controlling hypertension in the working area of the Panjang Bandar Lampung Puskesmas in 2019 (p value 0,000. OR 4.9).
Conclusion: there is a relationship of family support in patients with high blood pressure in controlling hypertension

Keywords: High Blood Pressure, Hypertension Control, Family Support

INTISARI : HUBUNGAN DUKUNGAN KELUARGA PADA PASIEN DENGAN TEKANAN DARAH TINGGI DALAM PENGENDALIAN HIPERTENSI

Pendahuluan: Berdasarkan data Dinkes Kota Bandar Lampung tahun 2018, data kejadian hipertensi tertinggi berada di Puskesmas Panjang sebanyak 12.142 orang, Puskesmas Kemiling sebanyak 10.706 orang, Puskesmas Way Halim sebanyak 10.049 orang, Puskesmas Sukaraja sebanyak 9.272 orang, Puskemas Tanjung Karang sebanyak 9.940 orang (Dinkes Kota Bandar Lampung, 2018).
Tujuan : diketahui hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi
Metode: Jenis penelitian ini adalah *Kuantitatif*. Desain *Survei Analitik* dengan pendekatan *cross sectional*. Populasi adalah penderita hipertensi yang mengikuti kegiatan Prolanis di Wilayah Kerja Puskesmas Panjang Kota Bandar

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Lampung Tahun 2019 sebanyak 106 orang, sampel sebanyak 106 responden yang mengalami hipertensi, pengambilan sampel pada penelitian *accidental sampling*.Uji statistik menggunakan uji *chi square*.
Hasil penelitian :Ada hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019 (*p value* 0,000. OR 4,9).
Kesimpulan : Ada hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi

Kata Kunci : Tekanan Darah Tinggi, PengendalianHipertensi, Dukungan Keluarga

PENDAHULUAN

Berdasarkan data dari lembaga kesehatan dunia yaitu WHO pada tahun 2015, penderita hipertensi di dunia yaitu sekitar 1,13 miliar. Hal ini menunjukkan bahwa 1 dari 3 orang di dunia yang terdiagnosis hipertensi, hanya 36,8% diantaranya yang minum obat.Jumlah penderita hipertensi di dunia terus meningkat setiap tahunnya, diperkirakan pada 2025 akan ada 1,5 miliar orang yang terkena hipertensi. Diperkirakan juga setiap tahun ada 9,4 juta orang meninggal akibat hipertensi dan komplikasi (Profil Kemenkes RI, 2018).

Berdasarkan data Riskesdas 2013, prevalensi hipertensi di Indonesia yaitu sebesar 25,8%, prevalensi tertinggi terjadi di Bangka Belitung (30,%) dan yang terendah di Papua (16,8%). Sementara itu, data Survei Indikator Kesehatan Nasional (Sirkesnas) tahun 2016 menunjukkan peningkatan prevalensi hipertensi pada penduduk usia 18 tahun ke atas sebesar 32,4%. Selain itu, menurut data BPJS Kesehatan, biaya pelayanan hipertensi mengalami peningkatan setiap tahunnya, yakni Rp. 2,8 triliun pada 2014, Rp. 3,8 triliun pada 2015, dan Rp. 4,2 triliun pada 2016 (Profil Kemenkes RI, 2018).

Berdasarkan data Dinkes Kota Bandar Lampung tahun 2018, data kejadian hipertensi tertinggi berada di Puskesmas Panjang sebanyak 12.142 orang, Puskesmas Kemiling sebanyak 10.706 orang, Puskesmas Way Halim sebanyak 10.049 orang, Puskesmas Sukaraja sebanyak 9.272 orang, Puskemas Tanjung Karang sebanyak 9.940 orang (Dinkes Kota Bandar Lampung, 2018).

Hipertensi yang tidak mendapat penanganan yang baik menyebabkan komplikasi seperti Stroke, Penyakit Jantung Koroner, Diabetes, Gagal Ginjal dan Kebutaan. Stroke (51%) dan Penyakit Jantung Koroner (45%) merupakan penyebab kematian tertinggi.Kerusakan organ target akibat komplikasi Hipertensi akan tergantung kepada besarnya peningkatan tekanan darah dan lamanya kondisi tekanan darah yang tidak terdiagnosis dan tidak diobati. Organ-organ tubuh yang menjadi target antara lain otak, mata, jantung, ginjal, dan dapat juga berakibat kepada pembuluh darah arteri perifer itu sendiri. Selain itu Hipertensi banyak terjadi pada umur 35-44 tahun (6,3%), umur 45-54 tahun (11,9%), dan umur 55-64 tahun (17,2%). Sedangkan menurut status ekonominya, proporsi Hipertensi terbanyak pada tingkat menengah bawah (27,2%) dan menengah (25,9%) (Kemenkes RI, 2019)

Menurut data *Sample Registration System* (SRS) Indonesia

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tahun 2014, Hipertensi dengan komplikasi (5,3%) merupakan penyebab kematian nomor 5 (lima) pada semua umur. Pembiayaan Jaminan Kesehatan Nasional (JKN) Tahun 2015 menunjukkan sebanyak 1,3 juta orang atau 0,8% peserta JKN mendapat pelayanan untuk penyakit Katastropik, yang menghabiskan biaya sebanyak 13,6 triliun rupiah atau 23,9 % yang terdiri dari; Penyakit Jantung (11,59 %), Gagal Ginjal Kronik (4,71 %), Kanker (4,03 %), Stroke (1,95%), Thalasemia (0,73%), Cirosis Hepatitis (0,42%), Leukemia (0,3%), Haemofilia (0,16%) (Kemenkes RI, 2019)

Upaya yang telah dilakukan dalam pencegahan dan pengendalian Hipertensi di antaranya, pertama meningkatkan promosi kesehatan melalui KIE dalam pengendalian Hipertensi dengan perilaku 'CERDIK'.Kedua meningkatkan pencegahan dan pengendalian Hipertensi berbasis masyarakat dengan *'Self Awareness'* melalui pengukuran tekanan darah secara rutin. Ketiga, penguatan pelayanan kesehatan khususnya Hipertensi, pemerintah telah melakukan berbagai upaya seperti: meningkatkan akses ke Fasilitas Kesehatah Tingkat Pertama (FKTP), optimalisasi sistem rujukan, dan peningkatan mutu pelayanan. Keempat Salah satu upaya pencegahan komplikasi Hipertensi khususnya Penyakit Jantung dan Pembuluh Darah di FKTP menggunakan Carta Prediksi Risiko yang di adopsi dari WHO (Kemenkes RI, 2019)

Muhammadun (2010), beberapa hal yang perlu diperhatikan dalam upaya pengendalian hipertensi diantaranya dengan olah raga teratur, istirahat yang cukup, pengendalian hipertensi dengan cara medis, pengendalian hipertensi dengan cara tradisional, cara mengatur pola makan. Menurut Dalimartha et al. 2011, upaya pengobatan hipertensi dapat dilakukan dengan pengobatan non farmakologis, termasuk mengubah gaya hidup yang tidak sehat.

Penderita hipertensi membutuhkan perubahan gaya hidup yang sulit dilakukan dalam jangka pendek oleh karena itu, faktor yang menentukan dan membantu kesembuhan pada dasarnya adalah diri sendiri. Enam langkah dalam perubahan gaya hidup yang sehat bagi para penderita hipertensi yaitu mengontrol pola makan, meningkatkan konsumsi potasium dan magnesium, makan makanan jenis padi-padian, aktivitas (olah raga), bantuan dari kelompok pendukung (dukungan keluarga), berhenti merokok dan hindari konsumsi alkohol berlebih dan terapi herbal (Palmer, 2007).

Salah satu tindakan dalam pengendalian hipertensi adalah dengan adanya dukungan keluarga untuk mengawasi anggota keluarga dalam program pengendalian tekanan darah.Dukungan keluarga memiliki pengaruh yang besar pada anggota keluarga yang menderita hipertensi.Menurut Friedman (2010) Keluarga juga berfungsi untuk melaksanakan praktik asuhan kesehatan, yaitu untuk mencegah terjadinya gangguan kesehatan atau merawat anggota keluarga yang sakit. Anggota keluarga sangat membutuhkan dukungan dari keluarganya karena hal ini akan membuat individu tersebut merasa dihargai dan anggota keluarga siap memberikan dukungan untuk menyediakan bantuan dan tujuan hidup yang ingin dicapai individu (Friedman, 2010). Sarafino (2012) menyatakan bahwa dukungan sosial mengacu pada memberikan

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kenyamanan pada orang lain, merawatnya, atau menghargainya. Menurut Cohen & Mc Kay (1984) dalam Niven (2011) bahwa dukungan keluarga terdiri dari 4 komponen yaitu, dukungan emosional, dukungan informasi, dukungan nyata dan dukungan pengharapan.

Berdasarkan hasil prasurvey yang dilakukan di Wilayah Kerja Puskesmas Panjang setelah dilakukan pengukuran Tekanan Darah menggunakan spygnamometer terhadap 6 orang yang menjalani kunjungan di BP Penyakit dalam, 4 orang (66.67%) diantranya mengalami tekanan darah tinggi dengan nilai antara 140/100 mmhg-150/110 mmhg, dan dari ke empat pasien tersebut didampingi oleh keluarga masing-masing, sedangkan 2 (33.33%) diantaranya memiliki TD normal namun memiliki keluhan seperti jantung berdegup kencang, mudah lelah, serta mengeluh pusing, pasien datang ke ruang pemeriksaan tanpa ditemani oleh keluarga.

Adapun tujuan dari penelitian ini adalah untuk mengetahui hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019.

Berdasarkan latar belakang di atas, peneliti tertarik melakukan penelitian dengan judul "hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019".

METODOLOGI PENELITIAN

Penelitian ini merupakan jenis penelitian kuantitatif.Rancangan dalam penelitian ini menggunakan desain*Survei Analitik* dengan pendekatan *cross sectional*.Populasi penderita hipertensi yang aktif dalam kegiatan Prolanis di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019 sebanyak 106 orang.Sampel total populasi.Variabel independen dalam penelitian ini adalah dukungan keluarga, sedangkan variabel depedennya adalah pengendalian hipertensi.Instrument penelitian dukungan keluarga dan pengendalian hipertensi menggunakan kuisioner.Uji statistik yang digunakan adalah uji *Chi Square* menggukana aplikasi SPSS versi 25.0. dan telah dilakukan uji etik dengan nomor No. 548?EC/KEP-UNIMAL/VIII/2019 tanggal 22 Agustus 2019.

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HASIL PENELITIAN DAN PEMBAHASAN

Hasil Penelitian

1. Karakteristik Responden

Tabel 1. Distribusi Frekuensi Responden Berdasarkan Usia, Jenis Kelamin, Pendidikan dan Pekerjaan

Karakteristik Responden	Jumlah	Persentase
Usia:		
40-49 Tahun	23	21.7
50-59 Tahun	34	32.1
60-69 Tahun	44	41.5
70-79 Tahun	5	4.7
Jenis Kelamin:		
Laki-laki	44	41.5
Perempuan	62	58.5
Pendidikan:		
SD	13	12.3
SMP	35	33.0
SMA	53	50.0
PT	5	4.7
Pekerjaan:		
Tidak bekerja	47	44.3
Buruh	16	15.1
Pegawai Negeri	30	28.3
Pegawai Swasta	10	9.4
Wiraswasta	3	2.8

Berdasarkan tabel 4.1 diketahui bahwa sebagian besar responden berusia 60-69 tahun yaitu sebanyak 44 responden (41,5%), berjenis kelamin perempuan yaitu sebanyak 62 responden (58,5%), pendidikan SMA 53 responden (50.0%) dan tidak bekerja sebanyak 47 responden (44.3%)

2. Analisis Univariat

Tabel 2.
Distribusi Frekuensi Responden Berdasarkan dukungan keluarga dan Pengendalian Hipertensi

Dukungan Keluarga	**Jumlah**	**Persentase**
Baik	47	44.3
Cukup	59	55.7
Pengendalian Hipertensi		
Baik	50	47.2
Kurang Baik	56	52.8
Jumlah	**106**	**100,0**

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Berdasarkan tabel 2 diketahui bahwa bahwa responden dengan dukungan keluarga cukup yaitu sebanyak 59 responden (55,7%), responden 52,8%).

dengan pengendalian hipertensi kurang baik yaitu sebanyak 56 responden (

3. Analisis Bivariat

a. Hubungan Dukungan Keluarga Pada Pasien Dengan Tekanan Darah Tinggi Dalam Pengendalian Hipertensi

Tabel 3
Hubungan Dukungan Keluarga Pada Pasien Dengan Tekanan Darah Tinggi Dalam Pengendalian Hipertensi

Dukungan Keluarga	Pengendalian Hipertensi				Total	*P Value*	OR (CI 95%)
	Baik		Kurang Baik				
	n	%	n	%			
Baik	32	68.1	15	31.9	47	0,000	4,9 (2,1-11,1)
Cukup	18	30.5	41	69.5	59		
Total	20	47.2	56	52.8	106		

Hasil penelitian didapatkan bahwa dari 47responden dengan dukungan keluarga baik sebanyak 32 responden (68,1%) pengendalian hipertensi baik, sedangkan dari 59responden dengan dukungan keluarga cukup sebanyak 18 responden (30,5%) pengendalian hipertensi baik. Hasil uji *chi square* didapatkan nilai *p value* 0,000, artinya lebih kecil dibandingkan dengan nilai alpha (0,000< 0,05). Dengan demikian dapat disimpulkan secara statistik dengan derajat kepercayaan 95%, diyakini terdapat hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019. Sedangkan hasil uji OR diperoleh nilai 4,9 (CI 95% 2,1-11,1) artinya responden dengan dukungan keluarga baik berpeluang4,9 kali lebih besar untuk pengendalian hipertensi baik dibandingkan responden yang dukungan keluarga cukup.

Pembahasan

1. Univariat

a. Dukungan Keluarga

Distribusi frekuensi responden dengan dukungan keluarga cukup yaitu sebanyak 59 responden (55,7%), sedangkan yang dukungan keluarga baik sebanyak 47 responden (44,3%).

Dukungan keluarga adalah suatubentuk perilaku melayani yang dilakukanoleh keluarga baik dalam bentuk dukungan emosional, penghargaan / penilaian, informasional dan instrumental (Setiadi, 2008).Keluarga merupakan tempat yang aman dan damai untuk membantu pemulihan daripenyakit. Hal ini terjadi karena seseorang tidak mungkin memenuhi kebutuhan fisikmaupun psikologis sendirian. Individu membutuhkan dukungan social dimanasalah satunya berasal dari keluarga(Sinaga, 2015).

Keluarga merupakan suatu sistem, sebagai system keluarga mempunyai anggota yaitu ayah, ibu, kakak atau semuaindividu yang tinggal di dalam rumah.Masalah kesehatan yang dialami oleh salahsatu anggota keluarga dapat

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mempengaruhi anggota keluarga yang lain dan seluruh system. Keluarga merupakan system pendukung yang vital bagi individu-individu (Sudiharto,2012).

Keluarga berfungsi untuk mempertahankan keadaan kesehatan anggota keluarganya agar tetap memiliki produktifitas tinggi. Selain itu tugaskeluarga dalam bidang kesehatan adalah kemampuan mengenal masalah kesehatan, kemampuan mengambil keputusan untuk mengatasi masalah kesehatan, kemampuan merawat anggota keluarga yang sakit, kemampuan memodifikasi lingkungan untuk keluarga agar tetap sehat dan optimal,serta kemampuan memanfaatkan sarana kesehatan yang tersedia di lingkunganya(Setiadi, 2008).

Hasil penelitian ini sejalan dengan penelitian Imbran (2017) tentang menunjukan bahwa terbanyak responden memiliki dukungan keluarga sedang yaitu sebanyak 42 responden (60,0 %). Sebanyak 26 responden (37,1 %) termasuk dalam dukungan keluarga baik dan sebanyak 2 responden (2,9 %) termasuk dalam dukungan keluarga buruk.

Dari hasil ini penulis berasumsi keluarga yang peduli akan anggota keluarganya yang menderita hipertensi, maka ia akan memperhatikanpemberian makan, mengajak olahraga bersama, menemani dan mengingatkan untuk rutin dalam memeriksakan tekanan darah. Dukungan yang diberikan olehanggota keluarga menunjukan perhatian dank epedulian keluarga sehingga pasien hipertensi akan termotivasi untuk menjalani pengobatan dengan baik dan benar.

b. Pengendalian Hipertensi

Distribusi frekuensi responden dengan pengendalian hipertensi kurang baik yaitu sebanyak 56 responden (52,8%), sedangkan yang pengendalian hipertensi baik sebanyak 50 responden (47,2%).

Green dalam buku Notoadmodjo (2012) mengemukakan prilaku kesehatan dipengaruhi oleh tiga factor yaitu factor prediposisi *(predisporsing factor)* antara lain tingkat pengetahuan. sikap, keyakinan yang dimiliki. Faktor pendukung *(enabling factor)* antara lain tersedianya sarana dan prasarana posyandu, letak / lokasi yang strategis serta pendapatan keluarga. Faktor Pendorong *(reinforcing factor)* adalah dukungan dari tokohmasyarakat tokoh agama, sikap dan kedisiplinan petugas dalam pelayanan kesehatan, serta peran aktif dari pasien hipertensi untuk penatalaksanaan terapi diit hipertensi.

Penelitian ini sejalan dengan penelitian yang telah diteliti oleh Imbran (2017) yang menunjukkan 54 responden (77,1 %) memiliki kepatuhan yang sedang terhadap kepatuhan pengendalian hipertensi, dan sisanya terdapat 13 responden (18,6 %) memiliki kepatuhan yang baik terhadap kepatuhan pengendalian hipertensi, dan kategori buruk sebanyak 3 responden (4,3 %).

Hasil penelitian ini menunjukkan bahwa masih adanya perilaku yang buruk tentang penyakit hipertensi hal ini di sebabkan sebagian responden masih kesulitan untuk mengurangi konsumsi rokok, mengurangi konsumsi garam dan kesulitan melakukan olah raga secara teratur. Namun tidak semua berperilaku buruk terhadap penatalaksanaan penyakit hipertensi dimana masih ada beberapa pendapat responden yang mengatakan bahwa senam

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adalah satu pengendalian yang baik terhadap penyakit hipertensi. Selain dari pada itu responden juga berpendapat bahwa mengkonsumsi ikan asin dapatmemicu kenaikan tekanan darah sehingga hal ini tidak baik untuk penderita hipertensi.

2. Analisa Bivariat

Hubungan Dukungan Keluarga Pada Pasien Dengan Tekanan Darah Tinggi Dalam Pengendalian Hipertensi

Hasil uji *chi square* didapatkan nilai *p value* 0,000, artinya lebih kecil dibandingkan dengan nilai alpha (0,000< 0,05). Dengan demikian dapat disimpulkan secara statistik dengan derajat kepercayaan 95%, diyakini terdapat hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019. Sedangkan hasil uji OR diperoleh nilai 4,9 (CI 95% 2,1-11,1) artinya responden dengan dukungan keluarga baik berpeluang4,9 kali lebih besar untuk pengendalian hipertensi baik dibandingkan responden yang dukungan keluarga cukup.

Dalam penelian ini penderita hipertensi pada umumnya tinggal bersama keluarga, dukungan keluarga tersebut seharusnya mendukung agar penderita tetap sehat, namun hal ini menunjukkan mayoritas keluarga tidak mendukung dalam pengendalian tekanan darah pada penderita hipertensi di karenakan mayoritas keluarga tidak mengingatkan dan membantu dalam memilih makanan yang harus dimakan dan yang harus dihindari, serta tidak mengingatkan jadwal kontrol berobat pada penderita hipertensi.

Upaya terwujudnya pengendalian tekanan darah oleh penderita hipertensi adalah meningkatkan dukungan keluarga. Antar anggota keluarga harus bekerja sama agar penderita hipertensi mau dan mampu mengendalikan tekanan darahnya. Semakin baik dukungan keluarga maka akan semakin baik pula upaya penderita hiperetensi dalam mengendalikan tekanan darah sehingga penyakit hipertensi yang diderita tidak bertambah parah (Maharani & Syafrandi, 2016). Dukungan keluarga dapat menjadi strategi preventif yang paling baik dalam membantu anggota keluarga dalam mempertahankan dan meningkatkan kesehatannya, keluarga yang baik akan memberi pengaruh yang positif (Handayani & Wahyuni, 2012).

Hasdianah (2011), menjelaskan bahwa dukungan emosional, dukungan penghargaan, dukungan informasi dan dukungan instrumental keluarga mempengaruhi perilaku pasien hipertensi dalam pengendalian hipertensi. Adanya dukungankeluarga akan memberikan kekuatan dan menciptakan suasana saling memiliki satu sama lain ada anggota keluarga tersebut dalam memenuhi kebutuhan perkembangan keluarga.

Hasil penelian ini sejalan dengan penelian yang dilakukan Herlina, dkk (2011) yang menunjukkan bahwa dukungan emosional keluarga mempengaruhi perasaan dan movasi seseorang, juga terdapat hubungan antara dukungan informasi dengan perilaku penderita hipertensi yang secara fisiologis mudah lupa dan lambat dalam menerima stimulus. Selain itu penelitian Wulandhani dkk (2014), menunjukkan ada hubungan dukungan keluarga dengan motivasi pasien hipertensi dalam memeriksakan tekanan darahnya dengan p value= 0,000 < (α =0,05).

Menurut pendapat peneliti salah satu upaya untuk terwujudnya

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pengendali dan tekanan darah oleh penderita hipertensi adalah meningkatkan dukungan keluarga. Keluarga harus bekerja sama agar penderita hipertensi mau dan mampu mengendalikan tekanan darahnya, seperti dalam mengkonsumsi obat dan memantau tekanan darah di pelayanan kesehatan, bisa juga berupa menyiapkan obat pada waktunya, dan terus mengingatkan agar penderita patuh dalam mengkonsumsi obat hipertensi, seta mengetahui pantangan dalam makan penderita hipertensi. Semakin baik dukungan yang diberikan keluarga maka akan semakin baik pula perilaku pengendalian tekanan darah yang dimiliki responden. Perlu dipahami pula bahwa keluarga memiliki struktur kekuatan yang membantu mereka mampu mengubah perilaku yang mendukung kesehatan. Semakin baik dukungan keluarga yang diberikan maka penderita dalam mengendalikan tekanan darahnya akan semakin baik pula sehingga penyakit hipertensi yang dideritanya tidak bertambah parah.

Maka peneliti berasumsi terdapat responden dengan dukungan keluarga baik namun perilaku terhadap pengendalian hipertensi masih tidak baik karena tingkat motivasipenderita terhadap pengendalian hipertensi juga masih kurang dapat mempengaruhi penderita untuk mengendalikan hipertensi.Dan juga terdapat responden dengan dukungan keluarga tidak baik namun perilaku terhadap pengendalian hipertensi yangbaik karena tingkat motivasi tinggi dan responden(penderita hipertensi) peduli dengan kondisi dirinya terutama dalam hal mengendalikan hipertensi dan dimungkinkan keinginan mengendalikan penyakitnya timbul karena penderita hipertensi tersebut pernah merasakan sakit akibat hipertensi yang tidak baik.

KESIMPULAN

Distribusi frekuensi responden dengan dukungan keluarga cukup sebanyak 63 responden (51,2%). Distribusi frekuensi responden dengan pengendalian hipertensi kurang baik yaitu sebanyak 56 responden (52,8%). Ada hubungan dukungan keluarga pada pasien dengan tekanan darah tinggi dalam pengendalian hipertensi di Wilayah Kerja Puskesmas Panjang Kota Bandar Lampung Tahun 2019 (*p value* 0,000. OR 4,9).

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HUBUNGAN ANTARA DUKUNGAN KELUARGA DENGAN PERILAKU PENGENDALIAN HIPERTENSI PADA LANSIA DI DESA JERUKGULUNG KECAMATAN BALEREJO KABUPATEN MADIUN TAHUN 2015

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Abstrak

Hipertensi lebih dikenal oleh masyarakat dengan istilah penyakit tekanan darah tinggi. Hipertensi merupakan keadaan dimana tekanan sistolik >140 mmHg dan tekanan diastolik >90 mmHg. Rancangan penelitian ini adalah penelitian analitik kolerasi dengan metode *cross-sectional*. Populasi penelitian ini adalah semua lansia yang mengalami hipertensi di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun sepanjang Tahun 2015. Teknik sampling yang digunakan adalah *purposive sampling* dengan 56 sampel. Variabel independen yang diteliti adalah dukungan keluarga dengan lembar kuesioner dan variabel dependen adalah perilaku pengendalian hipertensi dengan lembar kuesioner. Analisa data dilakukan dengan uji *spearman rank* dengan tingkat kemaknaan yang digunakan 0,05. Hasil penelitian menunjukkan 14 orang (58,1%) dari 24 lansia yang mengalami dukungan keluarga kurang, mengalami perilaku pengendalian hipertensi kurang. Nilai ρ value = 0,000 < α = 0,05, maka H_0 ditolak dan H_1 diterima. Ada hubungan antara dukungan keluarga dengan perilaku pengendalian hipertensi pada lansia di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun tahun 2015. *Coeffient colleration* sebesar r= 0,460, yang diartikan kekuatan hubungan cukup kuat dan arah hubungan positif yang maknanya semakin buruk dukungan keluarga maka perilaku pengendalian hipertensi semakin buruk.

***Keywords*: Dukungan keluarga, perilaku pengendalian hipertensi.**

PENDAHULUAN

Peran adalah perilaku yang dikaitkan dengan seseorang yang memegang sebuah posisi tertentu. Posisi mengidentifikasi status atau tempat seseorang dalam suatu sistem sosial. Setiap individu menempati posisi ganda, seperti orang dewasa, pria, suami, petani, dan lain sebagainya. Peran keluarga adalah suatu kumpulan dari perilaku yang secara relatif bersifat homogen, dibatasi secara normatif dan diharapkan dari seseorang yang menempati posisi sosial yang diberikan. Masing-masing posisi yang ditempati seseorang dalam sebuah keluarga memiliki peran yang berbeda-beda. Keluarga diharapkan dapat melakukan perannya masing-masing dengan benar sesuai posisi yang disandangnya (Friedman, 2010). Hipertensi pada lansia disebabkan karena proses penuaan dimana terjadi perubahan sistem kardiovaskuler, katup mitral dan aorta mengalami sklerosis dan penebalan, miokard menjadi kaku dan lambat dalam berkontraktilitas. Kemampuan memompa jantung harus bekerja lebih keras sehingga terjadi hipertensi (Nugroho, 2008).

Prevalensi hipertensi di seluruh dunia, diperkirakan sekitar 15-20%. Hipertensi lebih banyak menyerang pada usia setengah baya pada golongan umur 55-64 tahun. Hipertensi di Asia

diperkirakan sudah mencapai 8-18% pada tahun 1997, hipertensi dijumpai pada 4.400 per 10.000 penduduk. Hasil Survey Kesehatan Rumah Tangga tahun 1995, prevalensi hipertensi di Indonesia cukup tinggi, 83 per 1.000 anggota rumah tangga, pada tahun 2000 sekitar 15-20% masyarakat Indonesia menderita hipertensi (Departemen Kesehatan RI, 2006).

Prevalensi penyakit hipertensi di negara maju seperti Amerika Serikat rata-rata 20 %.Penyakit hipertensi merupakan penyakit nomor satu di Amerika Serikat. Di negara Indonesia rata-rata 6-15 %.Presentasi ini mungkin masih tinggi karena jumlah anak dibawah 15 tahun di negara Indonesia lebih kurang 15 % dari populasi (Rahayu, 2012). Di Indonesia banyaknya lansia penderita hipertensi pada tahun 2009 sebanyak 6,9 juta jiwa dan hipertensi merupakan penyebab kematian nomor 3 setelah stroke dan tuberkulosis, yakni mencapai 6,7% dari populasi kematian pada semua umur di Indonesia. Data penelitian Departemen Kesehatan RI (2011) menunjukkan hipertensi dan penyakit kardiovaskular masih cukup tinggi bahkan cenderung meningkat seiring dengan gaya hidup yang jauh dari perilaku bersih dan sehat, mahalnya biaya pengobatan hipertensi, disertai kurangnya sarana dan prasarana penanggulangan hipertensi. Ditinjau dari perbandingan antara wanita dan pria, ternyata wanita yang lebih banyak menderita hipertensi (Suyono, 2001).

Pada tahun 2010 data jumlah penderita hipertensi yang diperoleh dari dinas kesehatan provinsi Jawa Timur terdapat 275.000 jiwa penderita hipertensi. Jumlah penderita hipertensi terbanyak di Jawa Timur terdapat di kota Pasuruan, sedangkan kota Kediri menduduki urutan keempat setelah kota Pasuruan, Probolinggo dan Madiun dengan jumlah penderita hipertensi sebanyak 38.626 jiwa (Soejono, 2003).

Perilaku Pengendalian hipertensi pada lansia yaitu untuk mencegahan terjadinya morbiditas dan mortalitas akibat komplikasi yang berhubungan dengan pencapaian dan pemeliharaan tekanan darah dibawah 140/90 mmHg. Perawatan dalam hipertensi diantaranya dalam ketaatan pengobatan meliputi perlakuan khusus mengenai gaya hidup seperti diet, istirahat dan olahraga serta konsumsi obat. Hipertensi memang penyakit berbahaya, namun bukan berarti orang akan menderita seumur hidup ketika terkena penyakit ini. Ini karena hipertensi dapat dikontrol(Iman, 2004).

Menurut Bomar (2004), bahwa dukungan emosional keluarga mempengaruhi terhadap status alam perasaan dan motivasi diri dalam mengikuti program terapi. Menurut Friedman (2010), Status sehat sakit para anggota keluarga dan keluarga saling mempengaruhi satu sama lain. Suatu penyakit dalam keluarga mempengaruhi jalannya suatu penyakit dan status kesehatan anggota keluarga. Keluarga merupakan jaringan yang mempunyai hubungan erat dan bersifat mandiri, dimana masalah-masalah seorang individu dapat mempengaruhi anggota keluarga yang lain dan seluruh system. Keluarga memiliki pengaruh yang penting sekali terhadap pembentukan identitas seorang individu dan perasaan harga diri. Keluarga memainkan suatu peran yang bersifat mendukung selama masa penyembuhan dan pemulihan klien. Apabila dukungan semacam ini

tidak ada, maka keberhasilan penyembuhan atau pemulihan (rehabilitasi) sangat berkurang.

METODE PENELITIAN

Rancangan yang digunakan dalam penelitian ini berdasarkan ruanglingkup penelitian merupakan penelitian*inferensial*, Berdasarkan tempat penelitian merupakan rancangan penelitian lapangan, Berdasarkan waktu pengumpulan data merupakan rancangan penelitian *crossectional*, Berdasarkan cara pengumpulan data merupakan rancangan penelitian *survey*, Berdasarkan ada atau tidaknya perlakuan merupakan rancangan penelitian *expost facto*, Berdasarkan tujuan penelitian merupakan rancangan penelitian *analitik korelasional*, Berdasarkan sumber data merupakan rancangan penelitian *primer*.

Sampel dalam penelitian berjumlah 56 responden. Teknik sampling pada penelitian ini menggunakan teknik *purposive sampling*. Untuk mengetahui hubungan dukungan keluarga dengan perilaku pengendalian hipertensi dilakukan pengujian statistik dengan menggunakan analisis *spearman rank*. Alasan menggunakan *spearman rank* karena skaladata variabel *independen* dan *dependen* adalah ordinal. dengan derajat kemaknaan α 0,05.*Spearman rank* merupakan suatu alat ukur yang digunakan untuk mengukur ada atau tidaknya korelasi antar variabel dan untuk melihat pola hubungan serta kuat hubungan antar variabel.

Analisa yang digunakan menggunakan program komputer sehingga pengambilan kesimpulan analisa adalah jika *P-Value* $\leq\alpha$ maka H0 ditolak dan H1 diterima dan untuk *P-Value*$>\alpha$ maka H0 diterima dan H1 ditolak. Pada penelitian ini nilai α adalah 5%.

HASIL PENELITIAN

Berdasarkan tabel 1.1 dapat diinterprestasikan bahwa hampir setengahnya bahwa lansia hipertensi pada penelitian ini dukungan keluarga kurang yaitu dengan responden sejumlah 24 orang (41,1%).

No	Dukungan keluarga	Frekuensi	Prosentase (%)
1.	Kurang	24	42,9
2.	Cukup	23	41,1
3.	Baik	9	16,1
	Jumlah	56	**100**

Tabel 1.1

Berdasarkan tabel 1.2 dapat diinterprestasikan bahwa hampir setengahnya bahwa lansia hipertensi pada penelitian ini Perilaku Pengendalian Hipertensi kurang baik sejumlah 25 orang (46,4%).

No	Perilaku Pengendalian Hipertensi	Frekuensi	Prosentase (%)
1.	Kurang Baik	25	46,4
2.	Cukup	24	42,9
3.	Baik	6	10,7
	Jumlah	**56**	**100**

Tabel 1.2

Berdasarkan tabel 1.3 dapat diketahui bahwa responden mempunyai dukungan keluarga dengan perilaku pengendalian hipertensi cukup yaitu 16 orang (28,6%) responden. Analisis untuk mengetahui hubungan antara dukungan keluarga dengan perilaku pengendalian hipertensi di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun. Tahun 2015 menggunakan korelasi *spearman rank* diperoleh hasil nilai ρ value = 0,000 $< \alpha =$ 0,05, maka H_0 ditolak dan H_1 diterima.maka dapat disimpulkan bahwa ada hubungan antara dukungan keluarga dengan perilaku pengendalian hipertensi Tahun 2015. Nilai R = 0,460 yang diartikan kekuatan hubungan

dalam kategori hubungancukup kuat dan arah hubungan positif yang artinya menunjukkan bahwa adanya korelasi searah antara tingkat dukungan keluarga dengan perilaku pengendalian hipertensi pada lansia di Desa Jerukgulung Keamatan Balerejo Kabupaten Madiun Tahun 2015, dan semakin kurangnya dukungan keluarga maka akan mempengaruhi kurangnya perilaku pengendalian hipertensi.

No	Dukungan keluarga	Perilaku Pengendalian Hipertensi						Jumlah	(%)
		Kurang		Cukup		Baik			
		∑	%	∑	%	∑	%		
1	Kurang	14	25,0%	7	12,5%	3	5,4%	24	42,9%
2	Cukup	6	10,7%	16	28,6%	1	1,8%	23	41,1%
3	Baik	6	10,7%	1	1,8%	2	3,6%	9	16,1%
	Jumlah	26	46,4%	24	42,9%	6	10,7%	56	100%
			ρ –value = 0,000		α = 0,05		R = 0,460		

Tabel 1.3

PEMBAHASAN

Berdasarkan tabel 1.1 tentang dukungan keluarga pada 56 lansia ditemukan bahwa sebagian besar (42,9%) lansia mengalami dukungan keluarga kurang. Hasil skoring dukungan keluarga menyatakan bahwa responden memiliki skor <15, dari 4 komponen yang diujikan, sebagian besar responden terganggu pada salah satu komponen yaitu dukungan informasi. Jenis kelamin merupakan faktor yang penting, prevalensi terjadinya hipertensi pada pria sama dengan wanita. Namun wanita terlindung dari penyakit kardiovaskuler sebelum menopause. Wanita yang belum menopause dilindungi oleh hormone estrogen yang berperan meningkatkan kadar High Density Lipoprotein (HDL). Kadar kolestrol HDL merupakan faktor pelindung dalam mencegahterjadinya proses aterosklerosis. Efek perlindungan estrogen dianggap sebagai penjelasan adanya imunitas wanita pada usia premenopause. Pada premenopause wanita mulai kehilangan sedikit demi sedikithormon estrogen yang selama ini melindungi pembuluh darah dari kerusakan. Proses ini terus berlanjut hormone estrogen tersebut berubah kuantitasnyasesuai dengan umur wanita secara alami, yang umumnya terjadi di umur 45-55 tahun. Peter dan Eshiet (2002) menyatakan bahwa terdapat perbedaan tingkat dan variasi dukungan keluarga pada lansia hipertensi antara laki-laki dan perempuan. Penyakit hipertensi lebih sering terjadi pada perempuan dari pada laki-laki. Suatu kenyataan bahwa sebagian besar penderita hipertensi adalah golongan ekonomi rendah. Perkembangan penyakit dari diri penderita bila tidak ditangani secara cermat dapat menimbulkan dukungan keluarga yang kurang pada lansia hipertensi dan keadaan ini menjadi halangan bagi lansia hipertensi dalam kehidupan bermasyarakat untuk memenuhi kebutuhan sosial ekonomi, juga tidak dapat berperan dalam pembangunan bangsa dan negara. Selain jenis kelamin dan pekerjaan responden, tingkat pendidikan juga berpengaruh terhadap dukungan keluarga terhadap lansia hipertensi.

Berdasarkan tabel 1.2 dapat diketahui bahwa prosentase kategori Perilaku pengendalian hipertensi 25 responden (46,4%) menggunakan dukungan keluarga kurang. Dari hasil kuisioner mencerminkan bahwa perilaku pengendalian hipertensi responden dipengaruhi oleh umur, jenis kelamin, pendidikan dan tingkat dukungan keluarga. Dapat dilihat dari usia lanjut bahwa 76-90 tahun sebagian besar yang mengalami hipertensi. Dilihat dari jenis kelaminya sebagian besar berjenis kelamin perempuan dengan jumlah 35 responden (62,5%). Dilihat dari pendidikannya,

sebagian besar responden bependidikan SD yaitu sebanyak 45 responden (80,4%). Dilihat dari tingkat dukungan keluarga, sebagian besar responden tingkat dukungan keluarganya kurang yaitu sebanyak 23 responden (41,1%).

Menurut Setiadi (2002) salah satu faktor yang mempengaruhi perilaku pengendalian hipertensi adalah dukungan keluarga. Faktor-faktor yang mempengaruhi bisa dari umur, jenis kelamin, riwayat keluarga setra orang lain yang dianggap penting (keluarga). Dimana keluarga dapat memberikan dorongan dan motivasi kepada lansia yang mengalami hipertensi ke arah pemecahan masalah. Dukungan keluarga dapat meningkatkan perilaku pengendalian hipertensi baik sehingga lansia hipertensi dapat lebih mengendalikan hipertensi dengan cara selalu diingatkan oleh anggota keluarga dengan mengatur pola makanya, kontrol, dan dalam pengobatanya. Dengan sering diberi motivasi oleh keluarganya lansia akan merasa lebih baik dalam pengandalian hipertensi. (Wald& Alvaro, 2004).

Keluarga mempunyai tugas dalam pemeliharaan kesehatan para anggotanya dan saling memelihara. Menurut Friedman (2002) keluarga sebagai sistem pendukung mempunyai tugas 1) Mengenal gangguan perkembangan kesehatan setiap anggotanya 2) Mengambil keputusan untuk melakukan tindakan yang tepat 3) Memberikan keperawatan untuk anggota keluarganya yang sakit, dan tidak dapat membantu dirinya karena cacat, usianya terlalu muda atau tua 4) Mempertahankan suasana dirumah yang menguntungkan kesehatan dan perkembangan kepribadian anggota keluarga 5) Mempertahankan hubungan timbal balik antara anggota keluarga dan lembaga kesehatan yang menunjukkan pemanfaatan dengan baik fasilitas kesehatan yang ada. Dengan dukungan yang baik diharapkan adanya suatu penyemangat lansia dalam mejalani kehidupanya apapun itu penyakitnya khususnya dalam upaya pengendalian hipertensi yang sekarang ini sudah mulai menyerang usia remaja. Keluarga harus berperan penting dan tahu fungsinya sebagai faktor pendukung demi terciptanya keharmonisan dalam keluarga.

Berdasarkan hasil penelitian tentang hubungan antara dukungan keluarga dengan perilaku pengendalian hipertensi di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun Tahun 2015 menggunakan korelasi *spearman rank* dan data yang telah dikumpulkan dianalisis, dan diperoleh nilai *p value* = 0,000 karena *p value* < α 0,05 maka dapat disimpulkan H0 ditolak dan H1 diterima, sehingga dapat disimpulkan bahwa ada hubungan antara dukungan keluarga dengan perilaku pengendalian hipertensi pada lansia di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun Tahun 2015. Nilai R = 0,460 yang diartikan kekuatan hubungan dalam kategori cukup kuat dan arah hubungan positif yang artinya menunjukkan bahwa adanya korelasi searah antara tingkat hubungan antara dukungan keluarga dengan perilaku pengendalian hipertensi di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun Tahun 2015, dan semakin kuranganya dukungan keluarga maka akan semakin mengalami perilaku pengendalian hipertensi rendah.

Dalam hasil penelitian sebelumnya yang dilaksanakan pada tahun 2013 oleh Herlinah pada

tahun 2013 di wilayah Kelurahan Tugu Utara Kecamatan Koja Jakarta Tahun 2013 yang berjudul Hubungan antara dukungan keluarga dengan perilaku lansia dalam pengendalian hipertensi di wilayah Kelurahan Tugu Utara Kecamatan Koja Jakarta menggunakan korelasi *Chi Square* dan data yang telah dikumpulkan dianalisis, dan diperoleh nilai *p value* = 0,01 ($p<\alpha$), karena *p value* < α (0,05) maka dapat disimpulkan H0 ditolak dan H1 diterima, sehingga dapat disimpulkan bahwa ada hubungan antara dukungan keluarga dengan perilaku lansia dalam pengendalian hipertensi di wilayah Kelurahan Tugu Utara Kecamatan Koja Jakarta Kediri tahun 2013. Nilai *r* = 0,421 yang diartikan kekuatan hubungan dalam kategori cukup dan arah hubungan positif yang artinya menunjukkan bahwa adanya korelasi searah antara tingkat dukungan antara dukungan keluarga dengan perilaku lansia dalam pengendalian hipertensi di wilayah Kelurahan Tugu Utara Kecamatan Koja Jakarta Kediritahun 2013. Dan juga dalam penelitian yang dilaksanakan pada tahun 2014 oleh (Sri Ayu Wulandhani, Sofiana Nurchayati, Widia Lestari) di Puskesmas Mojo Kecamatan Gubeng Surabaya Tahun 2014 yang berjudul Hubunganan antara dukungan keluarga dengan motivasi lansia hipertensi dalam memeriksakan tekanan darahnya. Dengan menggunakan korelasi *chi square* dan data yang telah dikumpulkan dianalisis, dan diperoleh nilai *p value = 0,000 < (α = 0,05),* maka dapat disimpulkan H0 ditolak dan H1 diterima, sehingga dapat disimpulkan bahwa ada hubungan antara dukungan keluargadengan motivasi lansia hipertensi dalam memeriksakan tekanan darahnya di Puskesmas Mojo Kecamatan Gubeng Surabaya Tahun 2014. Nilai *r* = 0,523 yang diartikan kekuatan hubungan dalam kategori cukup dan arah hubungan positif yang artinya menunjukkan bahwa adanya korelasi searah antara tingkat dukungan antara dukungan keluarga dengan motivasi lansia hipertensi dalam memeriksakan tekanan darahnya di Puskesmas Mojo Kecamatan Gubeng Surabaya Tahun 2014.

Lanjut usia akan mengalami penurunan fungsi tubuh akibat perubahan fisik, psikososial, kultural, spiritual. Perubahan fisik akan mempengaruhi berbagai sistem tubuh salah satunya adalah sistem kardiovaskuler. Masalah kesehatan akibat dari proses penuaan dan sering terjadi pada sistem kardiovaskuler yang merupakan proses degeneratif maka dari itu lansia perlu memiliki faktor pendukung seperti keluarga, teman, dan rekan kerja yang akan mendengarkan dan memberikan nasihat dan dukungan emosional akan sangat bermanfaat bagi seseorang yang mengalami stress termasuk lansia hipertensi (Kellicker, 2010).

Perilaku pencegahan komplikasi pada lansia dengan hipertensi dipengaruhi oleh beberapa faktor, salah satunya adalah peran keluarga. Peran keluarga sangat penting dalam menurunkan komplikasi hipertensi. Hal ini karena keluarga mempunyai peran sebagai pendorong, penyelaras, sahabat, pengasuh keluarga dan sebagai inisiator-kontributor (Friedman, 2010). Selain itu, keluarga juga merupakan sumber kesehatan primer dalam pemberian perawatan kesehatan bagi semua anggota keluarga yang sedang mengalami masalah atau suatu penyakit yang sedang diderita yang pada kasus ini adalah

lansia dengan penyakit hipertensi (Friedman, 2010).

Keluarga adalah sebagai *support system* bagi lansia dalam mempertahankan kesehatannya dan pelaksanaan tugas keluarga yang adekuat berupa mengenal masalah kesehatan lansia, mengambil keputusan yang tepat untuk mengatasi masalah kesehatan lansia, merawat anggota keluarga lansia, mempertahankan suasana di rumah yang menguntungkan kesehatan dan perkembangan kepribadian lansia, dan menggunakan fasilitas pelayanan kesehatan dan sosial dengan tepat sesuai dengan kebutuhan lansia terbukti mempengaruhi perilaku lansia dalam mencegah terjadinya komplikasi hipertensi. Hipertensi pada lansia diharapkan bisa terkontrol dan dampak yang ditimbulkan berupa komplikasi hipertensi tersebut dapat diminimalisir.

SIMPULAN

Tingkat dukungan keluarga pada lansia yang mengalami hipertensi di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun Tahun 2015 diketahui bahwa sebagian besar responden memiliki dukungan keluarga kurang. Perilaku Pengendalian Hipertensi pada lansia di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun Tahun 2015 memiliki perilaku pengendalian hipertensi kurang baik. Ada hubungan antara dukungan keluarga dengan Perilaku pengendalian hipertensi pada lansia di Desa Jerukgulung Kecamatan Balerejo Kabupaten Madiun Tahun 2015 dengan kekuatan hubungan cukup kuat dan arah positif.

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RESEARCH ARTICLE

Role of family support and self-care practices in blood pressure control in individuals with hypertension: results from a cross-sectional study in Kollam District, Kerala [version 1; peer review: 2 approved]

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Abstract

Background: Despite the availability of effective drugs, blood pressure (BP) control rate is sub-optimal in individuals with hypertension in low- and middle-income countries (LMICs). The role of self-care in the management of BP is less studied in LMIC settings.
Methods: We conducted a community-based, cross-sectional study in individuals with hypertension in Kollam district, Kerala. A multistage cluster sampling method was used for the selection of study participants. We measured self-care by using an adapted Hypertension Self-Care Activity Level Effects (H-SCALE) scale. Descriptive statistics were used to summarise the data and logistic regression analysis was conducted to identify factors associated with BP control.
Results: In total, 690 individuals with hypertension (women=60%) and a mean age of 57±8 years participated in the study. More than half (54%) of the participants were adherent to anti-hypertensive medications. However, the adherence rate was much lower for the dietary approach to stop hypertension (DASH) diet (12.8%), recommended level of physical activity (24%) and weight management (11.4%). Overall BP control was achieved in two of five individuals (38.4%, 95% CI: 34.7-42.0%). Among self-care activities, adherence to medications (AOR: 1.8, 95% CI: 1.3-2.5), DASH diet (AOR: 1.5, 95% CI: 1.0-2.4), and non-smoking status (AOR: 3.3, 95% CI: 1.7-6.4) were associated with control of BP. Additionally, good family support to self-care (AOR: 1.9, 95% CI: 1.1-3.1) was associated with better control of BP.
Conclusion: In individuals with hypertension, the BP control rate is achieved in two of five individuals. Adoption of self-care activities are sub-optimal. Both family support and adherence to self-care activities are associated with BP control. Family based interventions to improve

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2. **Timothy Walker**, University of Newcastle, Newcastle, Australia

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adherence to self-care activities could have a significant public health impact in achieving better population-level BP control rates in Kerala, India.

Keywords
Hypertension, blood pressure control, self-care, family support, India

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Introduction

Globally, hypertension is a major cause of premature death and disability. Two of five adult individuals worldwide have raised blood pressure (BP)[1]. Annually, more than 10 million deaths and 200 million disability adjusted life years (DALYs) are attributable to elevated BP[2]. Hypertension is undoubtedly a major risk factor for stroke, heart failure, coronary heart disease and chronic kidney disease. More than half of the deaths due to cardiovascular disease (CVD) are linked to complications from hypertension[3]. Hypertension is also a major public health problem in India, affecting almost one in three adult individuals[4]. Additionally, high BP is attributable to more than 1.5 million deaths and 38 million DALYs in India[5].

Optimal BP control is essential to prevent the premature deaths and related disability attributable to hypertension. For example, a reduction of more than a third in the risk of stroke and a reduction of a quarter in the risk of myocardial infarction and heart failure are associated with optimal BP control in individuals with hypertension[6]. However, BP control rates are abysmal in low- and middle-income countries (LMICs) even with the availability of effective drugs for management of hypertension[7]. The disproportionately higher number of deaths from elevated BP in LMICs as compared to high-income regions is largely attributable to sub-optimal control of BP.

Hypertension is prevalent in two of five adult individuals in the state of Kerala, India[8]. Despite the availability of a relatively strong public health system[9], BP control rate is poor in Kerala. For example, the BP control rate at the population level in adults over 18 years was less than 15% in a recent state-wide representative survey conducted in Kerala[8]. In order to achieve optimal BP control, it is desirable to identify the major road blocks and target them with comprehensive health system approaches.

Comprehensive management of hypertension requires both pharmacological and lifestyle modification. Self-care has been recognised as an important determinant for achieving optimal BP control at the individual level. According to the World Health Organisation (WHO), self-care is defined as "the ability of individuals, families and communities to promote health, prevent disease, maintain health and to cope with illness and disability with or without the support of a healthcare provider"[10]. Further, hypertension guidelines advise self-care activities such as self-monitoring of BP, reduction of dietary sodium intake, increase in physical activity, limiting alcohol intake, adoption of a dietary approach to stop hypertension (DASH) diet plan, weight management and abstinence from tobacco as lifestyle modification strategies to achieve optimal BP control[11]. However, research in the areas of self-care practices and BP control are limited in LMICs. We aimed to assess hypertension self-care practices and its impact on BP control among adult individuals with hypertension in Kerala.

Methods

Ethical statement

The Institutional Ethics Committee of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, Kerala reviewed and approved the conduct of the study in Kerala (SCT/IEC/1450/NOVEMBER-2019). Written informed consent was obtained from all the study participants before administering the interview schedule. The participants had the freedom to refuse participation at the outset or during any stage of the study. There was no anticipated risk for participants by their involvement in the study. None of the selected participants refused participation.

Study design

We conducted a community based cross-sectional survey in Kollam District, Kerala, India.

Study setting

The study was conducted in five of eleven randomly selected '*block panchayats'* (panchayats are the lowest level of the three-tier local self-governance model in Kerala) of Kollam district, Kerala, India and the data collection took place between December 2019 to February 2020. The population size of Kollam district is 2.64 million, based on the 2011 census[12].

Study population

Individuals in the age group of 30–70 years, diagnosed with hypertension for at least six months and started on at least one antihypertensive drug as part of initial management were eligible to be part of the study. Individuals who could not communicate and were unable to provide informed consent were excluded from the study. A multistage cluster sampling method was used to identify eligible participants for the cross-sectional survey conducted in Kollam district, Kerala. The primary sampling unit was '*block panchayats*'. Initially, five of eleven '*block panchayats*' were randomly selected from Kollam District, Kerala using computer-generated random numbers. In the second stage of sampling, two primary health centres (PHCs: caters to a population of approximately 25,000–40,000) were identified by simple random sampling procedure from each '*block panchayat*'. Additionally from each primary health centre, we randomly identified three sub-centres (sub-centres cater to a population of approximately 5,000 individuals) for the study using computer-generated random numbers. We obtained the listing of all individuals with hypertension in the selected sub-centres based on the population-based screening records held by the Accredited Social Health Activists (ASHA) in the respective areas. From the chosen sub-centres, we randomly selected 23 individuals with hypertension using computer-generated random numbers from the population-based listing of all individuals with diagnosed hypertension. Participants were approached in person at their residence by the researcher (SC) with the help of a local community health worker (ASHA). Participants were provided with an information sheet (see *Extended data*[13]) in Malayalam language, which contains details about research aims, objectives, and information regarding study questionnaires.

Sample size

A sample size of 690 individuals with hypertension yields more than 80% power to estimate reliably a range of prevalence of self-care activities and BP control rate from 10% to 50%[8,14] with an absolute precision of 2.5% (assuming an alpha error of 0.05 and a design effect of 1.5).

Study variables and data collection

The researcher (SC) collected the data in person by visting each study participant at their residence. We collected information regarding sociodemographic factors, health-seeking behaviour, details related to comorbidities, family support and self-care practices. Self-care activities were captured using the adapted version of Hypertension Self-care Activity Levels Effects (H-SCALE) developed by Jan Warren-Fellow and Seymour[15]. The H-SCALE was modified to suit the cultural practices prevalent in Kerala. Questions related to intake of certain types of fruits and vegetables were modified and replaced with culturally relevant food items.A panel of experts with expertise in public health, epidemiology and clinical cardiology reviewed the face validity and content validity of the modified version of the questionnaire (see *Extended data*[16]). The modified tool was translated into the local language (Malayalam, see *Extended data*[17]), and piloted in five individuals with hypertension who were selected from Trivandrum district in Kerala. The piloting involved testing the wordings, possible responses, and clarity of instructions. The tool was finalised after an expert review of the responses received to each item of the scale in the piloting phase. Only minor changes to the wording of some of the items were introduced to improve clarity of the questions. We measured BP and heart rate of the study participants using a digital sphygmomanometer (OMRON HEM-7121). BP was measured after the individual was seated comfortably in an upright position with their arm rested and using an appropriate cuff-size. The BP was measured from the left arm as per the WHO guidelines. After obtaining the first reading, the cuff was deflated fully and the next measurement was conducted after three minutes. The measurement was repeated for the third time by following the same procedure. The mean of the consecutive three readings was obtained and recorded as the BP of the individual.

Definitions

Medication adherence: We used a three-item scale to measure how many days the person took the medication in a week at the recommended dosage and at the recommended time. The scores for each item were summed (range 0–21). A score of 21 was considered as good adherence.

Adherence to the DASH diet: We used an 11-item scale to assess the intake of healthy foods associated with the nutritional composition of the DASH diet. The scores for each item were summed. The possible range of scores for the DASH-Q scale was 0 to 77. A score of <32 was considered as low diet quality; a score between 33 and 51 was considered as medium quality, and scores of 52 or greater were considered as good adherence.

Physical activity engagement: A two-item scale measured the number of days of physical activity of at least 30 minutes for each participant. The scores on both items were summed (range 0-14). A score of eight or above was considered as good adherence to physical activity.

Smoking: The scores in a two-item scale were summed (range 0-14). Respondents who scored zero were considered as adherent to non-smoking.

Weight management: A 10-item scale measured weight management activities in the last month. The sum of the scores on all items ranged from 10-50. Individuals who scored above 40 were considered as adherent to weight management practices.

Alcohol use: Individuals who did not drink alcohol at all were considered as alcohol abstinent.

Family support: A 16- item scale measured the influence of family members on diet and other health behaviour. The average score on all items ranged from 0.94–2.56. We categorised family support into minimal, mild, moderate and strong based on quartiles of the observed score. A score of <1.37, 1.38–1.56, 1.57–1.68, and 1.69 or greater were considered as minimal, mild, moderate and strong support, respectively.

BP control: BP control was defined as a mean BP ≤140/90 mmHg in all individuals based on the average of three readings.

Data analysis

We performed all data analysis in SPSS Version 25. Categorical variables were presented as frequencies and percentages. Continuous variables were presented as means with standard deviations. We performed multivariate logistic regression analysis to identify independent factors associated with BP control. All variables found to be statistically associated with BP control in the bivariate analyses at a higher p-value threshold of 0.1 were considered in the multivariate model.

Results

General characteristics of the study population

In total, 690 individuals (response rate = 100%) participated in the study. The age of participants ranged from 31 to 70 years with a mean age of 57±8 years (Table 1). More than half of the participants (59.7%) were women. More than one-quarter (29%) of participants had primary or less than primary level of education. One in 10 women (10.7%) were living alone, while this was true for 3% of men. Below poverty level (BPL) ration cards were held by 44% of participants. Individual-level data for each participant are available as *Underlying data*[18].

BP related characteristics of the study population

The mean age of diagnosis of hypertension was 50±9 years (Table 2). Nearly three of five participants (59%) measured their BP at least once in a month. However, three-quarters (74.8%) of individuals were not aware of their last BP values. More than half (54%) were seeking treatment from public facilities. Similarly, more than half of the study participants (52.5%) visited a physician or health worker at least on a monthly basis. Only 10.8% and 7.3% of men and women were monitoring BP at home, respectively.

Hypertension in isolation was present in 30% of the study population. Diabetes (39.1%) and dyslipidemia (32.2%) were the major comorbid conditions. The proportion of study participants with hypertension and one or two or more co-morbidities were 39% and 31.2%, respectively.

Self-care practices

The overall prevalence of medication adherence among study participants was 54.8% (Table 2). The medication

Table 1. General characteristics of the study population.

Characteristics	Men N=278	Women N=412	p-value
Age, mean (SD)	57.40 (±8.91)	56.93 (8.73)	0.489
Age group, n (%)			0.520
31 - 40	16 (5.8)	23 (5.6)	
41-50	41 (14.7)	78 (18.9)	
51-60	109 (39.2)	147 (35.7)	
61-70	112 (40.3)	164 (39.8)	
Marital status, n (%)			0.0001
Married	249 (89.6)	267 (64.8)	
Single /divorced	29 (10.4)	145 (35.2)	
Education, n (%)			0.360
Primary	74 (26.6)	127 (30.8)	
Secondary	146 (52.5)	213 (51.7)	
Higher secondary	58 (20.9)	72 (17.5)	
Occupation, n (%)			0.001
Self/formal employment	89 (32.0)	50 (12.1)	
Unemployed	37 (13.3)	27 (6.6)	
Retired	45 (16.2)	32 (7.8)	
Homemakers	0	262 (63.6)	
Daily wages	107 (38.5)	41 (10.0)	
Living alone, n (%)			0.001
Yes	9 (3.2)	44 (10.7)	
No	269 (96.8)	368 (89.3)	
Income categories, n (%)			0.262
Below poverty line	114 (41.0)	188 (45.6)	
Above poverty line	164 (59.0)	224 (54.4)	

adherence was higher in men (60.4%) as compared to women (51%). Adherence to the DASH diet was very poor in both men (14.4%) and women (11.7%). Overall, 24% of participants were engaged in the recommended level of physical activity. Adherence to the recommended level of physical activity was very low in women (15.8%) as compared to men (36%). Nearly one-third (32.7%) of men were smokers. Alcohol use was prevalent in 13.3% of men. Overall, 11.4% of the individuals were adherent to weight management practices (Table 2).

Family support in self-care

More than half (53.2 %) of men and 62.1% of women reported minimal to mild family support to self-care activities. Similarly, 47.6% and 37.7% of men and women reported moderate to strong family support to self-care activities related to hypertension management, respectively (Table 2).

Factors associated with BP control

The proportion of individuals with controlled BP increased with the improvement in family support from minimal (26.6%) to strong support (48.8%). Similarly, the mean systolic BP was lowest in individuals with strong family support to self-care activities (140.10±2.82 mmHg) as compared to individuals with minimal family support (149.05±3.35mmHg) (Figure 1).

Age group, gender, educational level or occupation did not show any association with control of BP in the bivariate analysis (Table 3). Similarly, duration of hypertension, home BP monitoring and frequency of BP monitoring were not associated with BP control. Only a quarter of patients living alone (24.5%) achieved BP control as compared to 40% in patients living with other family members (p = 0.04). Individuals seeking care from both private and public facilities were less likely to achieve BP control as compared to individuals seeking care from either private or public facilities. BP control rate improved with family support, adherence to medications and DASH diet. BP control rate was also better in those who were adherent to non-smoking practices as compared to smokers (Table 3).

In the multivariate model (Table 4), participants who were adherent to medication were approximately 1.5 times more likely to have controlled BP than non-adherent individuals (P = 0.009, OR = 1.5, 95% CI = 1.1-2.2). Individuals who were adherent to the DASH diet were 1.6 times more likely to have controlled BP as compared to the non-adherent group (P = 0.043, OR = 1.6, 95% CI = 1.0-2.6). Similarly, adherence to non-smoking improved the odds of BP control by almost three times (P = 0.001, OR = 3.1, 95% CI = 1.6-6.3).

Discussion

BP control is an important treatment goal for prevention of cardiovascular disease and related complications in individuals with hypertension. Self-care practices are sub-optimal and they are strongly associated with BP control in individuals with hypertension in Kerala. Additionally, family support enhances adherence to self-care practices related to BP management.

The overall BP control rate in our study population is higher than the data reported in previous studies from Kerala. For example, a large cross-sectional survey conducted in Kerala observed that BP control is only achieved in less than 15% of individuals with hypertension[8]. As a standard practice in community-based surveys on hypertension prevalence, the above cited study included all individuals with elevated BP above the hypertension threshold of 140/90 mmHg in the 'uncontrolled BP' category. Hence, even the individuals with a first time diagnosis of hypertension based on a single visit BP measurement are labelled as 'uncontrolled hypertension'. However, we have included those who were diagnosed with hypertension for at least six months, started on at least one antihypertensive drug as part of initial management, and had a BP above the hypertension threshold in the 'uncontrolled BP'

Table 2. Blood pressure, health seeking pattern and adherence to self-care components.

Characteristics	Men	Women	p-value
Age at diagnosis, mean (SD)	50.50 (9.5)	50.62 (9.3)	0.871
Duration of hypertension, mean (SD)	6.90 (6.6)	6.31 (6.3)	0.237
Systolic BP (mmHg), mean (SD)	142.55 (20.7)	144.59 (19.4)	0.186
Diastolic BP (mmHg), mean (SD)	87.55 (11.5)	86.90 (11.3)	0.465
Health care facility, n (%)			0.840
Public	150 (54.0)	228 (55.3)	
Private	84 (30.2)	116 (28.2)	
Both	44 (15.8)	68 (16.5)	
Visit to a physician/health worker, n (%)			0.433
Weekly/monthly	146 (52.5)	198 (48.1)	
Twice/once in a year	53 (19.1)	79 (19.2)	
Rarely	79 (28.4)	135 (32.8)	
Home BP monitoring, n (%)			0.142
Yes	30 (10.8)	30 (7.3)	
No	248 (89.2)	382 (92.7)	
Awareness of last BP value, n (%)			0.432
Yes	75 (27.0)	99 (24.0)	
No	203 (73.0)	313 (76.0)	
Frequency of BP monitoring, n (%)			0.220
Monthly	175 (62.9)	232 (56.3)	
Twice/once in a year	37 (13.3)	65 (15.7)	
When symptoms occur/rarely	66 (23.7)	115 (28.0)	
Perceived BP control status, n (%)			0.143
Yes	115 (41.4)	195 (47.3)	
No	163 (58.6)	217 (52.7)	
Family support in self-care, n (%)			0.065
Minimal	66 (23.7)	118 (28.6)	
Mild	82 (29.5)	138 (33.5)	
Moderate	55 (19.8)	78 (18.9)	
Strong	75 (27.0)	78 (18.9)	
Self-care practices, n (%)			
Medication adherence	168 (60.4)	210 (51.0)	0.018
DASH diet adherence	40 (14.4)	48 (11.7)	0.347
Physical activity adherence	100 (36.0)	65 (15.8)	<0.001
Weight management adherence	44 (15.8)	37 (9.0)	0.009
Alcohol abstinence	241 (86.7)	412 (100.0)	<0.001
Non-smoking	215 (77.3)	412 (100.0)	<0.001

BP, blood pressure; SD, standard deviation; DASH, dietary approach to stop hypertension.

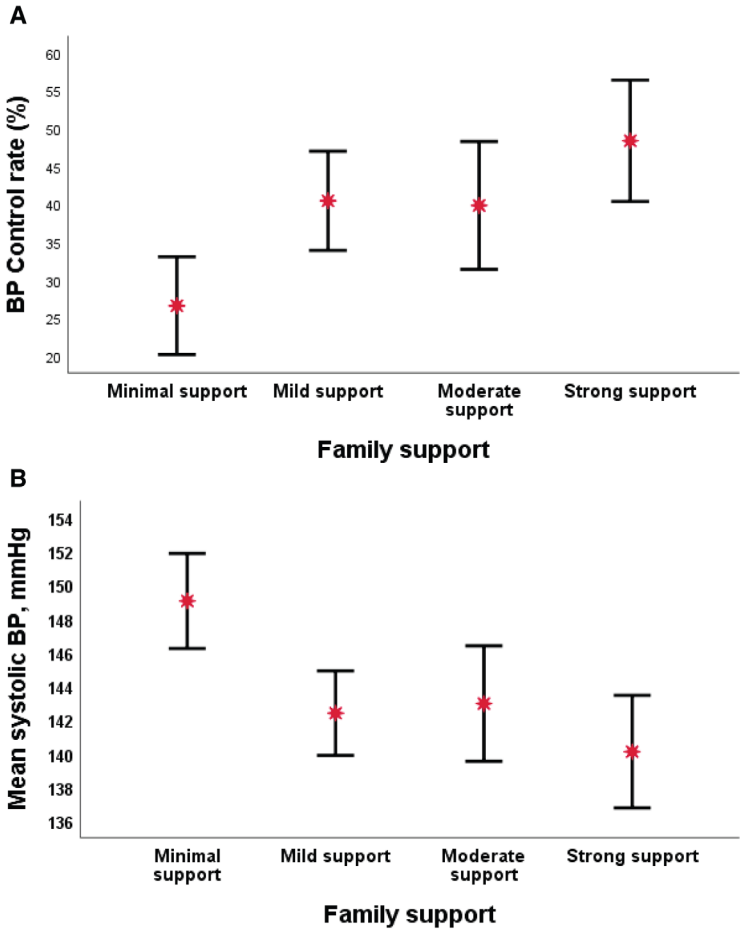

Figure 1. Panel **A**) Family support and blood pressure (BP) control rate. Panel **B**) Family support and mean systolic BP.

Table 3. Factors associated with blood pressure control.

Variable	Controlled n = 265	Uncontrolled n = 425	p-value
Age group, n (%)			0.429
31 - 40	18 (46.2)	21 (53.8)	
41 - 50	42 (35.3)	77 (64.7)	
51 - 60	105 (41.0)	151 (59.0)	
61 - 70	100 (36.2)	176 (63.8)	
Gender, n (%)			0.283
Men	114 (41.0)	164 (59.0)	
Women	151 (36.7)	261 (63.3)	
Education level, n (%)			0.730
Up to primary	78 (38.8)	123 (61.2)	
Secondary	141 (39.3)	218 (60.7)	
Higher secondary and above	46 (35.4)	84 (64.6)	

Variable	Controlled n = 265	Uncontrolled n = 425	p-value
Occupation, n (%)			0.962
Formal/self-employment	56 (40.3)	83 (59.7)	
Unemployed	25 (39.1)	39 (60.9)	
Retired	27 (35.1)	50 (64.9)	
Homemaker	101 (38.5)	161 (61.5)	
Daily wages	56 (37.8)	92 (62.2)	
Living alone, n (%)			0.044
Yes	13 (24.5)	40 (75.5)	
No	252 (39.6)	385 (60.4)	
Health care facility, n (%)			0.006
Public	154 (40.7)	224 (59.3)	
Private	83 (41.5)	117 (58.5)	
both	28 (25.0)	84 (75.0)	
Duration of hypertension, n (%)			0.245
<5 years	136 (37.9)	223 (62.1)	
5-10 years	74 (35.6)	134 (64.4)	
<10 years	55 (44.7)	68 (55.3)	
Home BP monitoring, n (%)			0.337
Yes	27 (45.0)	33 (55.0)	
No	238 (37.8)	392 (62.2)	
Frequency of BP monitoring, n (%)			0.922
Monthly	155 (38.1)	252 (61.9)	
Twice/once in a year	41 (40.2)	61 (59.8)	
When symptoms occur/rarely	69 (38.1)	112 (61.9)	
Family support, n (%)			0.001
Minimal	49 (26.6)	135 (73.4)	
Mild	89 (40.5)	131 (59.5)	
Moderate	53 (39.8)	80 (60.2)	
Strong	74 (48.4)	79 (51.6)	
Medication adherence, n (%)			<0.001
Adherent	169 (44.7)	209 (55.3)	
Non-adherent	96 (30.8)	216 (69.2)	
DASH diet adherence, n (%)			0.071
Adherent	42 (47.7)	46 (52.3)	
Non-adherent	223 (37.0)	379 (63.0)	
Physical activity adherence, n (%)			0.261
Adherent	70 (42.4)	95 (57.6)	
Non-adherent	195 (37.1)	330 (62.9)	
Weight management adherence, n (%)			0.924
Adherent	32 (39.5)	49 (60.5)	
Non-adherent	233 (38.3)	376 (61.7)	
Alcohol abstinence, n (%)			0.552
Adherent	253 (38.7)	400 (61.3)	
Non-adherent	12 (32.4)	25 (67.6)	
Non-smoking adherence, n (%)			0.001
Adherent	253 (40.4)	374 (59.6)	
Non-adherent	12 (19.0)	51 (81.0)	

BP, blood pressure; DASH, dietary approach to stop hypertension.

Table 4. Strength of association of self-care and control of blood pressure.

Variable	Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Living alone				
Yes	Reference		Reference	
No	2.0 (1.1-3.9)	0.034	1.7 (0.8-3.5)	0.116
Family support				
Minimal	Reference		Reference	
Mild	1.9 (1.2-2.9)	0.004	1.4 (0.9-2.2)	0.124
Moderate	1.8 (1.1-2.9)	0.013	1.3 (0.8-2.8)	0.218
Strong	2.6 (1.6-4.0)	<0.001	1.9 (1.1-3.1)	0.013
Health care facility				
Public	Reference		Reference	
Private	1.0 (0.7-1.5)	0.860	0.9 (0.6-1.3)	0.648
Both	0.5 (0.3-0.8)	0.003	0.5 (0.3-0.8)	0.005
Adherence to home BP monitoring				
No	Reference		*	
Yes	1.3 (0.8-2.3)	0.273		
Medication adherence				
Adherent	1.8 (1.3-2.5)	<0.001	1.5 (1.1-2.2)	0.009
Non-adherent	Reference		Reference	
DASH diet adherence				
Adherent	1.5 (1.0-2.4)	0.056	1.6 (1.0-2.6)	0.043
Non-adherent	Reference		Reference	
Physical activity adherence				
Adherent	1.2 (0.9-1.8)	0.224	*	
Non-adherent	Reference			
Weight management adherence			*	
Adherent	1.1 (0.7-1.7)	0.828		
Non-adherent	Reference			
Non-smoking adherence				
Adherent	3.3 (1.7-6.4)	<0.001	3.1 (1.6-6.3)	0.001
Non-adherent	Reference		Reference	
Alcohol abstinence				
Adherent	1.3 (0.7-2.7)	0.444	*	
Non-adherent	Reference			

BP, blood pressure; OR, odds ratio; CI, confidence interval; DASH, dietary approach to stop hypertension.
* Not included in multivariate analysis

category in our study. Therefore, the control rate observed in our study is among individuals who were formally diagnosed and treated for hypertension. Unlike other facility-based surveys, our results are based on a representative community-based sample of individuals with diagnosed hypertension.

Self-care practice was less than optimal in our study population. Despite the prescription of treatment and the follow-up by ASHA workers, only 55% were adherent to the medications. Additionally, adherence to DASH diet components were only observed in less than 15% of the study population. Our study demonstrates that self-care practices are very important in achieving optimal control of BP. We show that those who were adherent to drugs, the DASH diet and non-smoking achieved better BP control than the non-adherent group. Consistent findings on adherence to medication and BP control are reported in other studies[19–21].

BP control in individuals with hypertension often requires adherence to self-care activities beyond medications. However, self-care activities related to diet and smoking are often ignored. Clinical trial evidence suggests that a low sodium DASH diet improves the control of BP and reduces cardiovascular risk in individuals with hypertension[11]. In the PREMIER trial, the DASH diet and other lifestyle practices together reduced BP and cardiovascular events[22]. Despite the known benefits of a low

sodium DASH diet, adherence to DASH diet components were abysmally poor in our study. Community-based strategies to improve adherence to DASH diet components[23] and policy initiatives promoting low sodium salt[24] may improve the BP control rate at the population level. Prescribing mandatory targets for the food industry, front of pack labelling, food procurement policies and taxation are some additional policy initiatives to reduce population level salt consumption[25].

We show that smoking status is independently associated with BP control. Consistent findings are reported in the national health survey in England[26]. Available evidence also shows that nicotine in cigarettes acts as an adrenergic agonist and mediates release of catecholamines, which affects BP levels and heart rate[27]. Alcohol abstinence is also an important self-care practice that plays a significant role in the control of BP. In our study, alcohol use was not associated with BP control. However, the amount of alcohol consumption should be taken into consideration while exploring the association with BP control. In the INTERSALT study, a significant reduction in BP was observed in people who had limited their alcohol consumption[28]. The potentially causal relationship between alcohol abstinence and BP reduction in the INTERSALT study provides further evidence to recommend alcohol reduction to control BP in hypertensive individuals.

Family support of self-care activities is a key factor associated with BP control in our study. Better family support acts through improvements in the adherence to self-care activities and thereby improves BP control. The positive association between BP control and perceived family support emphasizes the need for health care providers to assess the available family support when managing individuals with hypertension. Further, it calls for innovative family-based models such as the Programme of Lifestyle Intervention in Families (PROLIFIC study) in managing BP[29]. The PROLIFIC model vouches for a family centred strategy for lifestyle changes and self-care for cardiovascular risk reduction. In a family centred approach, the proposed lifestyle changes and self-care strategies are more achievable and sustainable for the individuals and their family members[30].

Strengths and limitations

The study sample was representative of the population of Kollam District in Kerala. To the best of our knowledge, the impact of self-care activities on BP control is not studied in detail in community settings in India. Due to the self-reported nature of adherence pattern, the study is prone to recall and response bias. The associations observed in our study may not infer causality due to the cross-sectional nature of the study.

Conclusion

Overall, BP control is achieved in two of five participants with diagnosed hypertension and on treatment in Kerala at the community level. Further, compliance to self-care practices are less than optimal in the study population. Optimal adherence to self-care strategies is important in improving BP control rate in individual with hypertension. Family support is key to improving adherence to self-care practices and thereby facilitates individuals with hypertension to achieve improved BP control. Interventions to improve family support for self-care activities could have a significant public health impact in achieving better population-level BP control rates in Kerala, India.

Data availability

Underlying data

Figshare: Role of family support and self-care practices in blood pressure control in individuals with hypertension; results from a cross sectional study in Kollam District, Kerala. https://doi.org/10.6084/m9.figshare.12616325.v1[18].

This project contains the following underlying data:

- Dataset.csv (raw individual level data for each participant)
- Codes used in dataset.docx

Extended data

Figshare: Role of family support and self-care practices in blood pressure control in individuals with hypertension; results from a cross sectional study in Kollam District, Kerala. https://doi.org/10.6084/m9.figshare.12616214.v4[16].

This project contains the following extended data:

- Interview schedule English version.pdf

Figshare: Role of family support and self-care practices in blood pressure control in individuals with hypertension; results from a cross sectional study in Kollam District, Kerala. https://doi.org/10.6084/m9.figshare.12662042.v2[17].

This project contains the following extended data:

- Interview schedule malayalam version.pdf

Figshare: Role of family support and self-care practices in blood pressure control in individuals with hypertension; results from a cross sectional study in Kollam District, Kerala. https://doi.org/10.6084/m9.figshare.12662357.v1[13].

This project contains the following extended data:

- Participant information sheet english version.pdf
- Participant information sheet malayalam version 2.pdf

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Open Peer Review

Current Peer Review Status: ✔ ✔

Version 1

Reviewer Report 02 December 2020

https://doi.org/10.21956/wellcomeopenres.17726.r41518

✔ **Timothy Walker**
School of Medicine and Public Health, University of Newcastle, Newcastle, Australia

This is a well conducted and clearly described cross-sectional study assessing blood pressure control practices among a cluster-derived sampling of adult hypertensive patients in Kerala, India, and correlating this with blood pressure control at a single time point.
The sampling methodology is very clearly described. 100% participation is remarkable, and may reflect additional cultural or other factors at play.

The H-SCALE tool used was put through a rigorous translation, piloting and validation process prior to its use in the study. Results are clearly presented and well laid out. Generally it is clear what was found, and the authors present a sensible discussion of their results in light of the available literature.

A few minor suggestions for improvement follow below:

1. The p-values in Table 1 are not clearly described or annotated to make clear which statistical test was applied, or what question was to be answered by this test. It is generally preferable if a table can stand alone without further explanation, and an explanatory note should be added to Table 1 to aid interpretation.

2. The statistical methods used could be laid out more clearly. It is unclear which tests were used to arrive at the stated p-values in the Tables, and no check for normal distribution of data appears to have been undertaken prior to use of parametric tests. Overall the statistics are inadequately described to allow replication of results.

3. Using a single set of three blood pressure measurements to define a concept as complex as blood pressure control is obviously methodologically fraught. While this may well have been the most practical method available, this limitation should have been discussed, particularly given it related to the primary outcome.

Thanks for the opportunity to review this interesting study.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Yes

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Gastroenterology, Internal Medicine, Global Health, Medical Education.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Reviewer Report 13 November 2020

https://doi.org/10.21956/wellcomeopenres.17726.r41087

Yogesh Kalkonde
Society for Education, Action and Research in Community Health, Gadchiroli, India

In this manuscript the authors evaluated the role of family support and self-care on blood pressure control in Kollam district of India. The study found that blood pressure control was poor (40%) and certain self-care activities and good family support were associated with improved blood pressure control. These findings support evaluation of self-care and family-support interventions to improve control of hypertension which is a leading risk factor for death and disability globally. There is very little information on self-care and family support for hypertension control in community settings in India so this study is important.

It is a well conducted study. The authors could get a response rate of 100% which is really hard to achieve in field studies.

I have some suggestions which are listed below.

Title

- The title needs to reflect that the study was conducted in India. Abstract

The abstract is concise.

- The authors should define BP control in the abstract by specifying the cut offs e.g. <140/90.

Introduction

The introduction is well written, explains the rationale for conducting this study and provides the objectives of the study.

- The statement 'disproportionately higher number of deaths from elevated BP in LMICs…attributable to suboptimal control of BP' needs a reference.

- The statement 'self-care has been recognized as an important determinant…at the individual level' also needs a reference.

Methods

The methods section is clearly written.

- It would be beneficial for the readers if the authors can provide the rationale for conducting this study in the Kollam district of Kerala.

- The authors state that they drew 23 individuals with hypertension randomly from the population-based listing of all individuals with diagnosed hypertension. However, the source of this list is unclear. Was this list prepared during the population-based screening of hypertension under the national programme for prevention and control of chronic diseases? Was the list obtained from the primary health centres?

- The authors state that self-care activities were captured using H-SCALE tool. The authors have attached the tool in the supplement but it will be beneficial for the readers to describe in brief what the key components of this tool are in the methods section.

- In defining medications adherence, adherence to DASH diet, physical activity engagement, weight management, family support the authors provide certain cut-offs to classify these activities as good or mild, moderate and strong. What was the rationale for selecting these thresholds? It will be good to state this in the methods.

Results

- In Table 2, the authors should provide data on percentage of men and women with controlled BP in addition to providing mean systolic and diastolic BP.

- In Table 3, the categories in the duration of hypertension are listed as <5 years, 5-10 years and <10 years. The last category should be >10 years.

- The authors may want to change the title of Table 4 to 'strength of association of components of self-care and control of blood pressure'.

- In Tables 3 and 4, the terms non-smoking adherence and alcohol abstinence should be replaced with simpler terms such as current smoking and current alcohol use. Understanding non-smoking non-adherence can become challenging.

- The authors use weight management adherence as one of the parameters to assess self-

care but have not provided an information on obesity among the participants. It will be useful to provide this information.

Discussion

The authors have discussed the interpretation of their findings, the strengths and the limitations of their study. However, some additional discussion will be useful.

- Physical activity and weight management are important measures to improve blood pressure control. However, these factors were not associated with blood pressure control in this study. The authors may want to discuss briefly why this might be the case.

- While discussing no association between alcohol use and BP control the authors argue that this could be related to the amount of alcohol consumed but a more plausible reason in this study could be that a very few participants were using alcohol - 86.7% men and 100% women participants were alcohol abstinent. Therefore, finding an association between blood pressure control and alcohol use could be hard.

- Presence of other diseases e.g. diabetes, coronary artery disease and stroke among patients with hypertension might modify self-care and control. As the data on these comorbidities are not presented, this should be discussed as a limitation of the study.

Overall it is an excellent study which meets the standard of the journal and will advance this area of research further in India.

Is the work clearly and accurately presented and does it cite the current literature?
Yes

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Yes

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Public health, non-communicable diseases, epidemiology.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.