

Original Research

Quality of Life Measurement in Patients with Hypertension in Cyprus

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Introduction: Cardiovascular diseases and hypertension may have a significant impact on the quality of life of those who suffer from these conditions. The aim of the present study was to measure health-related quality of life among Cypriot patients suffering from hypertension and/or dyslipidaemia, as well as to investigate any temporal changes in their quality of life at 3 and 6 months from the initial visit.

Methods: A stratified random sampling method was used in this follow-up multi-centre study to select a representative sample of physicians who treat patients with hypertension in both public and private sector out-patient hospital clinics and physician offices. The participants were diagnosed by the physician according to the 2007 European guidelines for the management of arterial hypertension. The EQ-5D questionnaire was employed to measure self-assessed quality of life among these patients. Six hundred and fifty-four patients were recruited by physicians and agreed to participate, while 528 of them successfully completed EQ-5D at baseline and two subsequent phases (at 3 and 6 months), representing a response rate of 80.7%.

Results: A total of 39.6% of the respondents reported problems in one or more of the EQ-5D dimensions. This was more apparent in the case of anxiety and depression. There appeared to be statistically significant improvements with regard to mobility, usual activities, pain/discomfort and anxiety/depression dimensions between the initial visit and on first follow up, as well as subsequently. Median (interquartile range) EQ-5D index scores were 0.97 (0.19), 0.97 (0.19) and 0.97 (0.17) at first visit, first follow-up and second follow-up respectively ($p < 0.001$). Also, median EQ-5D VAS scores were 80 (20), 85 (10) and 90 (15) at the initial, first follow-up and second follow-up visit respectively ($p < 0.001$). Median EQ-5D VAS scores increased over time amongst all socio-demographic and risk groups of participants.

Conclusion: Hypertension had little association with mobility and physical activities, indicating that performing physical activities was not limited by hypertension. However, hypertension seems to be more strongly related to anxiety and depression.

Even though there has been a continuous decline in cardiovascular mortality in recent years (from 350/100,000 pop. in 1990 to 260/100,000 pop. in 2000), cardiovascular disease still affects millions of people worldwide, representing a leading cause of morbidity and mortality and imposing a significant economic burden upon societies. While re-

cent achievements are mainly attributable to a combination of prevention programmes as well as advances in biomedical technology, diseases of the circulatory system remain the first cause of disease in the western world, occupying the first place in terms of productive years lost and disability-adjusted life years.¹ According to the World Health Organisation, 17 mil-

lion deaths and 126 million life years lost are attributed to cardiovascular causes every year.² In addition, hypertension is a traditional risk factor for cardiovascular disease and during the last decades it has become one of the main contributors to the global burden of disease.³ It is reported that worldwide the prevalence of hypertension is more than 1 billion, while more than 7.1 million deaths may be attributed to hypertension annually.

In Cyprus, more than 200,000 people (24.6% of the total population) suffer from moderate to high hypertension. According to the Cyprus Cardiovascular Medical Association, the prevalence of hypertension is very high amongst the older age groups (i.e. as many as 53.3% in people over 60 years of age) but it is also fairly common amongst the younger age groups (e.g. 32.7% among people aged 40-59 years and 6.4% among those aged 20-39 years) (Cyprus Statistical Service).

Apart from the clinical and economic implications, cardiovascular diseases and hypertension may have a significant impact on the quality of life of those suffering from these conditions. Health-related quality of life (HRQL) is often considered to be equally, if not more important than quantity of life. It is a multi-dimensional element of well-being affected by the physical, mental, emotional and social status of patients, which is increasingly used to assess the health status of the general public and patients, as well as the impact of health care interventions.

The assessment of HRQL is a particularly interesting endeavour in patients with hypertension and dyslipidaemia, as these conditions are traditional risk factors for cardiovascular disease and therefore have a significant impact on the physical, social and mental domains that determine the patients' overall well-being and status. These two factors are highly correlated with other chronic diseases, such as diabetes and kidney disease.^{4,5} Moreover, the burden of hypertension is considered to be related to as many as 30% of all deaths worldwide.^{6,7}

Several studies have addressed the relationship between quality of life and hypertension. Among the common findings is that individuals with hypertension generally report lower scores in most dimensions of the short form 36 (SF-36) health survey questionnaire – for example physical capacity and vitality – compared to the general population.⁸⁻¹⁰ Additionally, most of these studies have shown that hypertension impairs vitality, social functioning, mental health, mood and psychological functioning.¹¹ Also,

it has been estimated that many patients with hypertension suffer from headache, dizziness, depression, anxiety and tiredness, and many studies have revealed an association between hypertension and these symptoms.^{12,13} Thus, the latest therapeutic schemes focus on symptom management as well as functional and quality-of-life improvement.¹⁴

On the other hand, dyslipidaemia is also becoming a common medical condition with increasing incidence. As many as 49% of adults in the USA have total cholesterol levels ≥ 200 mg/dl,¹⁵ while 2 out of 3 patients with cardiovascular disease (CVD) in Europe have total cholesterol levels ≥ 190 mg/dl. In Cyprus, according to the findings of a study conducted in 2005, 65% of people aged ≥ 65 years had total cholesterol levels > 200 mg/dl.¹⁶ In this context, improvement in the quality of life is very important in the management of patients suffering from hypertension and dyslipidaemia. Hence, quality-of-life measurement is important in order to assess the health status of patients with hypertension and dyslipidaemia and, in particular, any temporal changes that may occur as a result of medical care. The increasing trend in the numbers of patients with hypertension and dyslipidaemia in Cyprus makes this evaluation pertinent, since the gain from the better management of patients and improvement of their quality of life may be substantial.

The aim of the present study was to measure HRQL in patients suffering from hypertension and/or dyslipidaemia, as well as to investigate any temporal changes at three and six months after the initial visit to the doctor. In the present study, we employed a widely used generic instrument, the EuroQol Group's EQ-5D questionnaire, to measure the quality of life of these patients in Cyprus.

Methods

Study population and design

The study was designed as a follow-up multi-centre study. The participants were individuals diagnosed with hypertension and/or dyslipidaemia from 40 public and private centres across Cyprus (outpatient hospital departments and private physicians' offices). In order for a patient to be eligible for inclusion in the study, the following criteria were considered:

- Only patients aged 18 years or older, with informed consent.
- Patients diagnosed with hypertension: systolic blood pressure ≥ 150 mmHg at first visit.

- Patients with dyslipidaemia: low density lipoprotein (LDL) cholesterol >160 mg/dL (4.13 mmol/L), and/or high density lipoprotein (HDL) cholesterol <35 mg/dL (0.90 mmol/L) at first visit.

A stratified random sampling technique was used to select a representative sample of physicians (cardiologists, general practitioners, and internists) who treat patients with hypertension in both public and private sector outpatient hospital clinics and physicians' offices. In total, 68 physicians were selected from all Cyprus districts (44.1% from Nicosia, 29.4% from Limassol, 14.7% from Larnaca, 10.3% from Paphos). These physicians provided data regarding their patients' general demographic characteristics and collected the EQ-5D questionnaires completed by the participants. The study lasted for a period of 8 months (from November 2007 until June 2008). A total of 528 participants successfully completed the questionnaire in all three phases (response rate 80.7%).

The participants were diagnosed by a physician according to the 2007 European guidelines for the management of arterial hypertension. Comorbid situations were also recorded, especially with reference to diabetes, ischaemic heart disease and renal disorder.

The EQ-5D quality of life questionnaires were self-administered and respondents completed them while in their physician's office. A general information questionnaire was used to collect general demographic characteristics, including age, sex, region of residence, marital status, educational level, height, weight, drinking and smoking habits, and frequency of exercise. Body mass index (BMI) was calculated based on height and weight. A BMI <25 kg/m² was considered underweight or normal, while overweight or obesity was defined as BMI ≥25 kg/m².

The questionnaires were completed at three points in time: at the patient's first visit and enrolment in the study (phase A), at 3 months after the first visit (phase B, first follow up), and at 6 months after the first visit (phase C, second follow up).

Patient risk stratification

The 10-year risk of fatal CVD was evaluated for each patient, based on the "SCORE risk function" as proposed by the Third Joint Task Force European guidelines on CVD prevention. Consistently with a recent Cypriot study on the implementation of European guidelines for cardiovascular disease prevention, and in the absence of country-specific calibration, the

high-risk SCORE chart was used since, even though a Mediterranean country, Cyprus is included in the high risk region.¹⁷ The SCORE classification is based on the following five parameters: sex, smoking status, systolic blood pressure (after rounding to the nearest multiple of 20), total cholesterol (after rounding to the nearest whole unit), and age (after rounding to the nearest figure shown in the chart). Patients were categorised, according to the priorities defined in the European guidelines for CVD prevention,^{1,9} into the following risk groups: 1) patients with CVD (i.e. history of coronary, stroke or peripheral artery disease); 2) patients with diabetes (defined as either self-reported and/or on diabetes medication), but no history of CVD; 3) patients with neither CVD nor diabetes but a high risk of CVD (i.e. SCORE ≥5%); 4) patients with neither CVD nor diabetes and at low risk of CVD (i.e. SCORE <5%); and finally, 5) patients with incomplete data for risk calculation. Patients for whom the algorithm could not be applied because of missing data about several risk factors (i.e. lipids, blood pressure and smoking) were excluded from the SCORE calculation unless it was possible to assign them to one of the categories above, even given the uncertainty concerning some parameters.

Quality of life instrument

Both the EQ-5D and the EQ visual analogue scale (VAS) were used to measure health-related quality of life. The EQ-5D is a generic instrument for measuring health-related quality of life (created in 1987 by a network of international multidisciplinary researchers, in collaboration with York University, named the EuroQol Group: <http://www.euroqol.org>). The main advantage of EQ-5D is that it is brief and easy to understand, which usually ensures high response rates. Furthermore, its reliability and validity have been previously documented, while studies have demonstrated the high correlation of its dimensions with the corresponding dimensions of other widely used instruments. In this study, the Cronbach alpha internal consistency coefficient for the EQ-5D was calculated at 0.87. The EQ-5D is comprised of the EQ-5D index scale and the EQ-5D VAS. The EQ-5D index scale includes five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. Each dimension has three levels: no problems, some/moderate problems and severe problems, thus defining 243 possible health states. A preference-based scoring function is used to convert the information into a summary index score.

Scores are transformed using weights from the general population. The summary index score of 1 represents the best possible state of health and 0 represents the worst condition. EQ-5D also has a visual analogue scale (EQ-VAS), a 20 cm visual analogue scale where the respondent is asked to mark his/her own current state of health on a thermometer-like scale ranging from 0 to 100, with the endpoints labelled “best imaginable health state” (score 100) and “worst imaginable health state” (score 0).

Statistical analysis

Continuous data are expressed as median (interquartile range, IQR) and categorical data as counts (percentages). The normality distribution of the variables was tested using the Kolmogorov-Smirnov test and normal probability plots. Differences between paired groups were evaluated using the McNemar test or the McNemar-Bowker test in the case of categorical variables (i.e. change in the frequency distribution of the EQ-5D degree of severity across time) and Friedman’s test in the case of continuous variables (i.e. change in EQ-5D VAS score across time). The Mann-Whitney or Kruskal-Wallis tests were used to compare differences in EQ-5D VAS score between groups of participants according to their socio-demographic characteristics or risk profile. The association between continuous variables was assessed using Spearman’s rank correlation coefficient. A two-tailed p-value <0.05 was considered statistically significant. Statistical analysis was performed with SPSS 16.0 (Statistical Package for Social Sciences) for Windows.

Results

Of the 654 patients who were recruited by physicians and agreed to participate, 528 respondents successfully completed the EQ-5D questionnaire in all three phases, representing a response rate of 80.7%. Of these respondents, 61% were men with median age 55 years (IQR: 18) and 39% were women (median age 60 years, IQR: 11). The participants’ demographic characteristics are shown in Table 1.

The clinical data of the study participants are presented in Table 2 for the three different phases of the study. A decreasing trend was evident between the initial visit and the second follow up with respect to levels of total cholesterol, BMI, systolic pressure, diastolic pressure, LDL cholesterol and triglycerides ($p < 0.001$ in all cases). Only HDL cho-

Table 1. Socio-demographic characteristics and cardiovascular disease risk classification of study participants.

Characteristic	N (%)
Sex:	
Male	322 (61)
Female	206 (39)
Employment status:	
No (not capable of working, retired, housework)	229 (43)
Yes	299 (57)
Marital status:	
Married	457 (87)
Widowed/single	71 (13)
Education:	
Secondary	155 (29)
Tertiary	373 (71)
Smoking status:	
Never smoke	291 (55)
Ex-smokers	127 (24)
Smokers	110 (21)
Exercise:	
Never	218 (41)
≥1 time/week	310 (59)
Alcohol consumption:	
< 1 glass/day	276 (52)
≥ 1 glass/day	252 (48)
BMI:	
< 25	84 (16)
≥ 25	442 (84)
Risk group:	
CVD	108 (20.2)
DM	89 (17.2)
SCORE ≥ 5	123 (23.8)
SCORE < 5	196 (38)

BMI – body mass index; CVD – cardiovascular disease; DM – diabetes mellitus; SCORE ≥ 5 – patients at high risk of developing CVD; SCORE < 5: patients with low risk of developing CVD.

lesterol levels did not decrease significantly across time ($p = 0.12$).

The frequency distribution of the EQ-5D degree of severity is presented in Table 3. A total of 39.6% of the respondents reported problems in one or more of the EQ-5D dimensions. Anxiety and depression was the dimension most frequently noted as causing problems (27.6%). Concerning mobility, self-care, usual activities and pain/discomfort dimensions, no participant indicated severe problems, while regarding the anxiety/depression dimension 5.3%, 3.2% and 2.5% of participants indicated severe problems at the initial visit, first and second follow up, respectively. The vast majority of participants indicated no problems with regards to the self-care dimension (97.7%, 98.5% and 98.7% in the three phases of the study) and usual activities dimension (93.4%, 95.1% and 97.2% in the three phases of the study).

Table 2. Clinical data of the study participants in the three different phases of the study.

	Initial visit*	First follow up (3 months)*	Second follow up (6 months)*	p†
BMI	28.4 (6.2)	28.2 (5.6)	27.2 (5.2)	<0.001
Systolic pressure	140 (30)	130 (20)	127 (10)	<0.001
Diastolic pressure	85 (15)	80 (5)	80 (4)	<0.001
Total cholesterol	238 (76)	201 (50)	187 (38)	<0.001
LDL cholesterol	153 (60)	129 (47)	118 (34)	<0.001
HDL cholesterol	47 (19)	45 (16)	47 (14)	0.12
Triglycerides	150 (101)	138 (81)	130 (66)	<0.001

*Values are presented as median (interquartile range). †Friedman test
 BMI – body mass index; HDL – high density lipoprotein; LDL – low density lipoprotein.

Table 3. Number (and percentage) of participants by EQ-5D reported degree of severity.

EQ-5D profile	Initial visit n (%)	First follow-up n (%)	Second follow-up n (%)	p* (initial visit- 1st follow-up)	p* (initial visit- 2nd follow-up)	p* (1st follow-up- 2nd follow-up)
Mobility:						
No problem	441 (83.5)	452 (86.5)	458 (86.7)	0.02	0.002	0.29
Some problems	87 (16.5)	76 (14.4)	70 (13.3)			
Severe problems	0 (0)	0 (0)	0 (0)			
Self-care:						
No problem	516 (97.7)	520 (98.5)	521 (98.7)	0.13	0.18	0.99
Some problems	12 (2.3)	8 (1.5)	7 (1.3)			
Severe problems	0 (0)	0 (0)	0 (0)			
Usual activities:						
No problem	493 (93.4)	502 (95.1)	513 (97.2)	0.05	<0.001	0.003
Some problems	35 (6.6)	26 (4.9)	15 (2.8)			
Severe problems	0 (0)	0 (0)	0 (0)			
Pain/discomfort:						
No problem	450 (85.2)	478 (90.5)	485 (91.9)	<0.001	<0.001	0.17
Some problems	78 (14.8)	50 (9.5)	43 (8.1)			
Severe problems	0 (0)	0 (0)	0 (0)			
Anxiety/depression:						
No problem	382 (72.3)	406 (76.9)	422 (79.9)	0.006	<0.001	0.009
Some problems	118 (22.3)	105 (19.9)	93 (17.6)			
Severe problems	28 (5.3)	17 (3.2)	13 (2.5)			

*McNemar or McNemar-Bowker test

Statistically significant improvements were observed between the initial visit and the first follow up in terms of four out of five dimensions: mobility, usual activities, pain/discomfort and anxiety/depression. Further improvements from the first to the second follow-up visit were observed with regard to usual activities and anxiety/depression dimensions.

Median (IQR) EQ-5D index scores were 0.97 (0.19), 0.97 (0.19) and 0.97 (0.17) at the initial, first follow-up and second follow-up visits, respectively ($p < 0.001$). Median EQ-5D VAS scores were 80 (20), 85 (10) and 90 (15) at the initial visit, first follow up and second follow up, respectively ($p < 0.001$). The

association between quality of life, as indexed by the EQ-5D VAS score, and the participants' socio-demographic characteristics and risk profile is shown in Table 4. An increase in median EQ-5D VAS scores over time was observed in all socio-demographic and risk groups. Men, people in employment, those with higher education and BMI $< 25 \text{ kg/m}^2$, those who exercised ≥ 1 time/week and drank ≥ 1 glass/day tended to have higher EQ-5D VAS scores. Furthermore, patients in risk category SCORE < 5 had higher EQ-5D VAS scores than the rest of the groups, while patients with CVD consistently reported lower scores over time. With respect to age, at the first follow up,

Table 4. Quality of life as indexed by EQ-5D VAS score at baseline and subsequent visits by socio-demographic characteristics and risk group.

Participant Characteristic	EQ-5D VAS score Median (IR) Initial visit	p*	EQ-5D VAS score Median (IR) First follow-up	p*	EQ-5D VAS score Median (IR) Second follow-up	p*	p [†]
Gender:		<0.001		<0.001		0.001	<0.001
Male	80 (19)		86 (15)		90 (16)		
Female	80 (20)		80 (20)		89 (13)		
Employment status:		<0.001		<0.001		<0.001	<0.001
No (not capable of working, retired, housework)	80 (20)		80 (16)		85 (12)		
Yes	80 (19)		86 (15)		90 (12)		
Marital status:		0.6		0.5		0.5	<0.001
Married	80 (20)		85 (10)		90 (15)		
Widowed/single	80 (20)		80 (16)		90 (15)		
Education:		0.02		0.001		<0.001	<0.001
Secondary	80 (20)		80 (15)		86 (10)		
Tertiary	80 (20)		85 (14)		90 (15)		
Smoking status:		0.2		0.1		0.2	<0.001
Never smoke	80 (20)		85 (10)		90 (11)		
Ex-smokers	80 (23)		85 (15)		90 (20)		
Smokers	80 (20)		82 (15)		90 (12)		
Exercise:		<0.001		<0.001		0.1	<0.001
Never	80 (20)		80 (20)		90 (13)		
≥1 time/week	80 (15)		80 (15)		90 (15)		
Alcohol consumption:		0.001		0.003		0.01	<0.001
< 1 glass/day	80 (20)		84 (14)		90 (14)		
≥ 1 glass/day	80 (18)		85 (15)		90 (17)		
BMI:		0.05		0.04			
< 25	85 (22)		89 (15)		90 (11)		<0.001
≥ 25	80 (20)		85 (11)		90 (15)		
Risk group:		<0.001		<0.001		<0.001	<0.001
Patients with CVD	80 (15)		80 (18)		85 (15)		
Patients with diabetes	80 (25)		84 (20)		90 (15)		
SCORE ≥5	80 (19)		86 (11)		90 (15)		
SCORE <5	83 (15)		89 (15)				

*Between categories, Mann-Whitney or Kruskal-Wallis test. †Over time, Friedman test.

younger participants had higher EQ-5D VAS scores ($r_s = -0.1$, $p = 0.05$), but this association was not statistically significant either at baseline ($r_s = -0.1$, $p = 0.2$) or the second follow up ($r_s = -0.1$, $p = 0.1$).

Discussion

Undoubtedly, hypertension has an impact on health-related quality of life, as confirmed by findings from several studies in the last 25 years.¹⁸⁻²¹ In a large community-based study by Fryback et al,¹⁹ hypertensive patients reported lower age-adjusted mean scores on the Time Trade-off and the SF-36 General Health Perception (-6.0), Physical-Functioning (-5.2), Vitality (-3.8) and Mental Health (-2.3) scales. Additional adjustments for number of comorbid illnesses and number of antihypertensive medications did not alter the observed results. Similar findings were observed in another large scale study,⁸ where respondents who did not report hypertension had higher mean scores on all SF-36 scales than those who did, except with regard to the Role-Emotional and Mental Health component scales. The group comparisons were adjusted for socio-demographic characteristics (age, sex, marital status, education level, income, social group) and medical conditions (diabetes, angina, myocardial infarction, stroke). Similar findings were reported in the case of dyslipidaemic patients. In a study conducted by Lalonde et al,²² asymptomatic participants with high blood cholesterol confirmed by a physician and receiving cholesterol-lowering treatment (diet with or without lipid-lowering medication) reported a small reduction in HRQL on the SF-36 General Health scale and the rating scale, when compared to a similar group of asymptomatic participants without dyslipidaemia and who were not treated for their cholesterol. These results indicated that asymptomatic individuals diagnosed and treated for dyslipidaemia may not perceive themselves as being as healthy as those not receiving dyslipidaemia treatments.

In our study, anxiety and depression was the dimension most frequently noted as causing problems (27.6%) while self-care and usual activities appeared to be the dimensions least affected. This is consistent with the findings of a previous study conducted by Wang et al,²³ where hypertension was also found to be associated with anxiety and depression, with a percentage of participants reporting problems similar to those observed here (28.4%). This finding is also supported by other studies showing that hypertension impaired vitality, social functioning, mood and

psychological functioning,^{11,24} and was also associated with symptoms such as headache, dizziness and depression. It is worth noting, however, that in our study there appeared to be a significant improvement by the second follow up (at six months), possibly indicating that the initiation of antihypertensive treatment and other interventions to control hypertension and dyslipidaemia also had an effect on the patients' psychological well-being.

This result highlights the fact that proper treatment of hypertension and dyslipidaemia is necessary not only for the improvement of clinical indexes (i.e. decrease in mmHg and blood lipid levels), but also for the patients' social and psychological well-being. This finding is very important, especially in the light of a growing body of literature that supports the view that hypertensive and dyslipidaemic patients are under-treated. Many researchers and working groups on hypercholesterolaemia and hypertension^{25,26} have raised the issue of under-treatment of patients with coronary artery disease. In North America, only 30% of patients who survive a myocardial infarction are prescribed lipid-lowering drugs.²⁷ Similar findings were reported from European countries,²⁸ the Asian-Pacific region²⁹ and the United Kingdom.³⁰ There are similar findings in the literature with regard to under-treatment of hypertensive patients and the existing evidence supports the conclusion that the use of angiotensin-receptor blockers, particularly in the presence of symptomatic congestive heart failure, is recommended and that physicians should be educated and encouraged to prescribe anti-hypertensive agents and statins for those who are likely to have cardiovascular disease in the future.^{31,32}

In contrast to psychological well-being, according to our results hypertension did not show any strong association with mobility and physical activities, indicating that performing physical activities was not limited to a large extent by hypertension. While this finding is in accordance with results from two previous studies,^{23,33} a number of studies using the SF-36 questionnaire have reported lower physical capacity among hypertensive individuals compared to the general population.^{8,34} Perhaps this is an area that merits further investigation. Similarly, no one reported severe problems with regard to pain and discomfort in our study, while the percentage reporting some problems was also quite low. This is consistent with previous studies, since hypertension is not a disease associated with pain.^{20,23} Interestingly though, a decline was recorded between the initial visit and second follow up in the

percentage of those reporting some problems with regard to mobility and pain/discomfort.

Finally, we observed differences in quality of life amongst the participants in relation to their socio-demographic and risk characteristics. Participants in employment, those with higher education, those who exercised more and drank less, as well as those classified in the lower cardiovascular risk group (i.e. SCORE <5) had generally better quality of life scores. These findings are consistent with those of Khosravi et al,³⁵ according to whom education, income, occupation and marital status were all found to be associated with quality of life amongst hypertensive patients. Additionally, one study that explored the effect of physical activity on quality of life reported larger improvements in mental and physical aspects of among those who exercised more.³⁶ It is accepted that socio-economic factors have a decisive influence on whether a patient will follow the doctor's instructions regarding the recommended hypertensive treatment;³⁷ thus, these results may to some extent be attributed to an increased adherence to treatment in certain participant groups.

Hypertension is an important preventable cause of death, and the treatment of hypertension is a key strategy for the prevention of cardiovascular disease. We found that the reduced health-related quality of life in people with hypertension and/or dyslipidaemia is to a greater extent a product of anxiety and depression than of physical health. Improvements in both anxiety and depression, as well as other dimensions, paralleled the improvement of the clinical picture as recorded in two follow-up visits after the initiation of the treatment. Early diagnosis and compliance with recommended treatment is paramount in the successful management of this disease and ensuring better quality of life.

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