

**USEFULNESS OF PSYCHOLOGICAL AND MEDICAL CARE IN PATIENT
SUFFERING FROM HIGH BLOOD PRESSURE**

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ABSTRACT

This quantitative article presents a study conducted on 124 subjects suffering from high blood pressure. These subjects were divided into two groups: one receiving medical care only and the other receiving holistic care (medical and psychological). Quality of life, anxiety, depression, and psychological distress scales were administered to assess the participants. The results showed a difference between the two groups, indicating that patients with high blood pressure receiving holistic care, including medical and psychological components, exhibited a questionable state of anxiety and depression, along with a positive state of psychological well-being and a very low level of psychological distress compared to hypertensive patients receiving medical care alone.

KEYWORDS: - Psychological care; Medical care; Patient suffering from high blood pressure.

1.0 INTRODUCTION

Throughout history, humans have faced a constant battle against diseases that threaten their well-being and, in some cases, their very survival. These diseases include acute infectious, viral, parasitic illnesses, as well as chronic psychosomatic conditions.

In modern times, society is grappling with what are known as globalization diseases, often chronic conditions resulting from societal changes and new dietary habits. Chronic diseases require long-term care and have a significant impact on the lives of those affected and their loved ones. These diseases affect individuals across all social strata, regardless of age or economic status. According to the World Health Organization (2000), chronic diseases currently account

for 63% of annual deaths worldwide, making them the leading cause of mortality. By 2030, the number of deaths attributed to chronic diseases could surpass 52 million.

High blood pressure (HBP) is a prominent chronic disease and a key cardiovascular risk factor, significantly increasing the likelihood of cardiovascular complications such as stroke, heart attack, kidney failure, and lower limb arterial disease. It accounts for 51% of strokes globally (source: <http://www.who.int/whr/2000/en/>). HBP is also a significant risk factor for the development of type 2 diabetes, often diagnosed at a later stage. 80% of individuals with diabetes also have HBP, and 20% of those with HBP also have diabetes. Additionally, HBP is the primary cause of death in individuals with diabetes, surpassing cancer (WHO, 2010).

HBP is a prevalent condition in modern societies and a major risk factor for various cardiovascular, cerebrovascular, and renal diseases. As defined in "The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report," HBP is characterized by a systolic blood pressure (SBP) equal to or greater than 140 mm Hg and/or a diastolic blood pressure Hypertension, defined as a blood pressure (BP) equal to or greater than 90 mm Hg, was estimated to affect 26.4% of adults globally in 2000, with 65.7% of the 972 million affected individuals residing in developing countries. Once considered a health issue primarily in developed nations, hypertension has now become a significant concern in developing countries, especially in Africa, due to the rapid adoption of stressful Western lifestyles. The World Health Organization (WHO) reports that hypertension affects both developed and developing countries, with the highest prevalence (27%) found in the African Region. In 2012, the WHO estimated that 38.5% of adults aged 25 and over in the DRC had hypertension, with rates of 33.3% in men and 33.3% in women.

Traditionally, hypertension management has focused on prescribing antihypertensive medications to control blood pressure and prevent complications. While this approach is effective in reducing mortality and morbidity, it only addresses the biological aspect of the disease and overlooks the psychological, social, and behavioral aspects of the patient. Research suggests that a comprehensive management approach, integrating medical, psychological, social, and behavioral interventions, could lead to better long-term clinical outcomes.

Comprehensive hypertension management involves not only medication but also a holistic approach that includes stress management, dietary guidance, physical activity, patient education, and psychological support to promote healthy behaviors. This approach considers the patient as a whole, taking into account their psychosocial factors, lifestyle choices, and surroundings, rather than solely focusing on blood pressure levels.

Studies indicate that lifestyle modifications, such as stress reduction and dietary improvements, can significantly impact hypertension control. However, the effectiveness of comprehensive management compared to medical management alone in improving long-term outcomes in hypertensive patients, the influence of psychological and behavioral interventions on blood pressure regulation, and the impact of motivation and social support on the health behaviors of hypertensive patients remain important questions to explore.

Given that many concerns surrounding the comprehensive care of individuals with hypertension, we believe that conducting a comparative study between hypertensive patients receiving traditional medical care and those receiving a comprehensive approach would offer valuable insights into these issues. This study aims to address this purpose.

2.0 METHODOLOGICAL PARTICIPANTS

The target population of this study consists of patients suffering from high blood pressure in various health facilities in the city of Kinshasa. These subjects were selected based on the following criteria:

- ✓ Being a patient receiving medical and/or psychological care at the hospital
- ✓ Being available and willing to participate in the study

It is important to mention that these subjects were approached individually, either at their homes, at Saint-Joseph Hospital, or after their appointments with doctors, until we reached a total of 124 subjects. Among them, 60 subjects received only medical care, while 64 subjects received holistic care (both medical and psychological). All participants were administered three tools: the psychological distress scale, HAD, and quality of life assessment.

2.1 Tools

In our study, we used several tools to gather data on the psychological impact of blood pressure disease on individuals. These tools included the Quality of Life Scale, Anxiety and Depression Scale (HAD), and Psychological Distress Scale. Through the use of these instruments, we were able to assess the level of suffering experienced by individuals with blood pressure disease. Here is a breakdown of the tools we used:

2.1.1 HAD scale (Hospital Anxiety and Depression Scale)

✓ Nature

The Hospital Anxiety and Depression (HAD) scale is a 14-item questionnaire designed by Sigmund and Sinaith in 1983 to assess common psychological symptoms.

✓ **Objective**

The Hospital Anxiety and Depression (HAD) scale is a screening tool for anxiety and depressive disorders. It includes 14 items rated from 0 to 3. Seven questions assess anxiety, and seven assess depression, resulting in two scores (maximum score for each = 21).

✓ **Quoting**

For each item, four response modalities are coded from 0 to 3. The anxiety items (1, 3, 5, 7, 9, 11, 13) and depression items (2, 4, 6, 8, 10, 12, 14) are alternated. Additionally, an alternation in the order of the ratings (from 0 to 3 or from 3 to 0) was carried out to avoid bias linked to their repetition (reverse items). An overall score is calculated by summing the responses to the 14 items (ranging from 0 to 42), as well as two sub-scores corresponding to the two sub-scales (ranging from 0 to 21). The higher the scores, the more severe the symptomatology according to Zigmond and Snaith. Thresholds for the two sub-scores allowing identification of cases presenting depressive or anxious symptoms are as follows:

- From 0 to 7: absence of anxiety disorders and depressive disorders;
- 8 to 10: Suspected anxiety or depressive disorders;
- From 11 to 21: proven anxiety or depressive disorders.

✓ **Psychometric values**

Recent publications have confirmed the value of the HAD scale. Cronbach's coefficients range from 0.68 to 0.92, with 0.67 for the anxiety subscale and 0.90 for the depression subscale.

2.1.2 Psychological well-being scale

✓ **Nature and purpose of the scale**

The Carol Ryff Psychological Well-being Scale is an instrument that assesses both hedonic (happiness and life satisfaction) and eudaimonic (positive psychological functioning, satisfying relationships, self-actualization, and acceptance) well-being in individuals. There is no specific threshold score, but a higher score indicates stronger psychological well-being. This positive psychology measurement tool evaluates individuals aged 13 to 74 based on their well-being over the past two weeks. The scale consists of 18 items that measure well-being across the following dimensions:

- ✓ **Autonomy:** being independent and self-determined, resisting social pressures, regulating behavior internally, and evaluating oneself based on personal standards. A high score suggests independence and self-regulation. An example statement for this dimension could be: "I trust my opinions even when they differ from the majority."

- ✓ Environmental control: feeling mastery and competence in managing the environment, controlling external activities, using opportunities effectively, and creating contexts that align with personal needs and values. A high score indicates the ability to leverage opportunities and manage environmental factors, including day-to-day affairs and creating beneficial situations. An example statement for this dimension might be: "I generally feel responsible for my living situation."
- ✓ Personal development: Having a sense of continuous growth; being open to new experiences; feeling that one is reaching their full potential; recognizing improvements in oneself and behaviors over time as a result of increased self-awareness and effectiveness. A high score indicates ongoing personal growth, openness to new experiences, and acknowledgment of self-improvement. An example statement for this criterion could be: "I believe it is important to seek out new experiences that challenge my perspectives on myself and the world."
- ✓ Positive relationships with others: A high score indicates the respondent's involvement in genuine relationships characterized by empathy, reciprocity, privacy, and affection. An example statement for this criterion might be: "Others would describe me as a generous person who is willing to share my time with them."
- ✓ The meaning of life: Having fulfilling and warm relationships, caring for the well-being of others, demonstrating empathy, affection, and intimacy, and engaging in both giving and receiving. A high score reflects the respondent's belief in the meaningfulness and purposefulness of life. An example statement for this criterion could be: "Some people may drift aimlessly through life, but that is not my approach."
- ✓ Self-acceptance: having a positive outlook on oneself and one's past life; recognizing and accepting multiple aspects of oneself, including good and bad qualities. A high score reflects the respondent's positive attitude toward himself. An example statement for this criterion might be: "I appreciate most aspects of my personality."

In this study, we used the 5-point Ryff Likert-type scale (1 = completely disagree, to 5 = completely agree).

✓ **Psychometric qualities**

Originally, Ryff's (1989) questionnaire had 20 items for each of the six subscales. The respondent must indicate on a six-point Likert-type scale (1 = completely disagree, completely false, to 6 = completely agree, completely true) his or her way of being or acting in the face of

the situation. Ryff (1989) used these scales with 321 adults of different age groups: young adults (M = 19.5 years), adults (M = 49.8 years), and elderly people (M = 75 years). The internal consistency coefficients range from 0.81 to 0.88. The well-being scales are positively correlated with measures of positive functioning (life satisfaction, self-esteem, emotional balance) and negatively with depression, which indicates acceptable concurrent validity.

Ryff and Essex (1992) propose a shortened version that includes 14 items per scale with alphas from 0.83 to 0.91. This shortened version was translated and validated in French by Lapierre and Desrochers (1997). Lapierre, Dubé, Alain, and Bouffard, (2003) further reduced the questionnaire from 14 to 6 items per subscale. The internal consistency coefficients for each of the six subscales, obtained from a sample of retirees, are as follows: growth (alpha = 0.56), self-acceptance (alpha = 0.73), relationships with others (alpha = 0.78), competence (alpha = 0.78), meaning in life (alpha = 0.82) and autonomy (alpha = 0.66).

2.1.3 Kessler Psychological Distress Scale (K6)

✓ Nature

Author: Kessler (K.6).

Materials: The scale includes six items. Time allowed: 5 to 10 minutes.

✓ Aim

The purpose of the Kessler Psychological Distress Scale is to determine the state of psychological distress in subjects.

✓ Administration

The participant is given the scale, which includes six questions, and he or she chooses the answer in the box that best fits him or her. He or she is told that there are no rights or wrong answers.

✓ Counting and interpretation

The K6 scale rates items on a 5-point scale with a maximum score of 24. It includes questions about feelings of nervousness, hopelessness, restlessness, depression, discouragement, and worthlessness in the past month. Each of the six items is rated from 0 to 4 points, resulting in a total score between 0 and 24:

<50%	No distress psychological
50%	Psychological distress average
51 to 70%	Psychological distress certain
71 to 80%	Distress severe psychological

81 to 100%

Psychological distress deep

✓ Psychometric value

Several studies on the validity of the psychological distress scale reveal a Cronback alpha coefficient of 0.83.

2.2 Field activities

We initiated contact with patients suffering from blood pressure who met the study's inclusion criteria. This contact was made in healthcare settings selected for the study, facilitated by doctors who explained the study's benefits and sought consent from the patients. Once consent was obtained, the doctors provided us with the patients' contact information for scheduling appointments while maintaining their anonymity. We ensured the subjects' anonymity throughout the process and presented them with study materials to help them make an informed decision about participating.

Upon receiving consent, we proceeded to administer the various scales in a friendly atmosphere, conducting discussions in French, Kikongo, or Lingala, the community's languages.

2.3 Data processing

The data from our scales are based on the interval statistical scale. Thus, for their processing, we used descriptive statistics to better present our results (mean, median, mode, standard deviation, variance, etc.) and inferential statistics to comment on the differences observed between the results. We used SPSS statistical software to perform the statistical operations.

3.0 RESULTS**3.1 HAD Anxiety and Depression Results**

Table 1. Central tendency and dispersion indices at the HAD Depression scale level (N=124)

Status	Ind.Stat.	Anxiety	Depression
Median medical care	Average	17.67	16.23
		18.00	16.00
	Standard deviation	2,056	2,189
	Variance	4,226	4,792
Median Holistic Care	Average	10.38	8.14
		10.00	7.00
	Standard deviation	3,636	3,711
	Variance	13,222	13,774
Total	Average	13.90	12.06
	Median	16.00	13.50

Standard deviation	4,710	5,084
Variance	22,186	25,842

The data recorded in Table 1 show that subjects who receive medical care only obtained an average score of 17.67 on the anxiety dimension and 16.23 on the depression dimension. Placing these scores on the interpretation scale reveals the presence of symptoms related to anxiety and depression. On the other hand, subjects receiving holistic care scored moderately lower compared to those receiving medical care only, with average scores of 10.38 for anxiety and 8.14 for depression. Placing these scores on the interpretation scale indicates the presence of mild symptoms related to anxiety and depression. These results suggest that holistic care may be more effective in reducing anxiety and depression levels in individuals with high blood pressure.

3.2 Kessler Distress Scale (K6) results.

Table 2. Central tendency and dispersion indices at the level of the Kessler Distress Scale (K6) (N=124)

Status	Ind.Stat.	Distress level
(N=60)	Average	14.69
	Median medical care	16.00
	Standard deviation	3,473
	Variance	12,060
(N=64)	Holistic Care Medium	13.30
	Median	13.50
	Standard deviation	2,695
	Variance	7,264
(N=124)	Average	14.02
	Total Median	14.00
	Standard deviation	3,185
	Variance	10,146

Based on the information presented in Table 2, it is apparent that individuals who received medical care had an average psychological distress score of 14.69, while those who received holistic care had an average score of 13.30. Both groups fall into the category of severe psychological distress, as their scores surpass the critical threshold of 13. Notably, the medical care group had a higher level of psychological distress (15) compared to the holistic care group (13).

3.3 Presentation of psychological well-being results

Table 3. Central tendency and dispersion indices at the Quality of Life scale level (N=124)

Status	Ind. Stat.	Auth.	Mt. E	DP	RP	DSV	AS	NC
Socket in medical (N=60)	Charge Average	9.97	11.87	11.00	11.47	8.07	6.43	72.10
	Median	10.00	12.00	11.00	11.00	8.00	6.00	71.00
	Standard deviation	1,340	1,761	1,164	1,371	1,326	1,212	4,078
	Variance	1,795	3,101	1,356	1,880	1,758	1,470	16,634
Socket in holistic (N=64)	Charge Average	9.87	9.87	9.97	9.52	9.05	9.80	72.77
	Median	10.00	10.00	9.50	9.00	9.00	10.00	73.00
	Standard deviation	1,667	1,431	1,968	1,860	3,922	1,262	7,068
	Variance	2,778	2,048	3,872	3,460	15,379	1,593	49,960
Total (N=124)	Average	9.92	10.84	10.47	10.46	8.57	8.17	72.44
	Median	10.00	11.00	10.00	11.00	8.00	8.00	71.00
	Standard deviation	1,512	1,880	1,703	1,906	2,994	2,090	5,803
	Variance	2,286	3,535	2,901	3,633	8,962	4,369	33,680

The data in Table 3 show us that the subjects receiving medical care only obtained an overall average score of 72.10 on the well-being scale. And they obtained respectively for autonomy (9.97); mastery of the environment (11.87); personal development (11.00); positive relationships (11.47); meaning in life (8.07) and self-acceptance (6.43). By placing these scores on the interpretation scale.

We can conclude that these subjects demonstrate a pronounced overall state of well-being. In addition, subjects following holistic care also demonstrate a pronounced general state of well-being given that they also obtained an overall average score of 72.77 on the well-being scale including autonomy (9.87); mastery of the environment (9.87); personal development (9.97); positive relationships (9.52); meaning in life (9.05); and self-acceptance (9.80).

3.4 Study of the prerequisites necessary for choosing the nature of statistics for analyzing results

The nature of these data, which are on an ordinal or even interval scale, requires certain precautions in the judicious choice of compatible statistics for analyzing the results. These prerequisites require the study of the normality of distributions and the homogeneity of variances.

3.4.1 Study of the normality of the distributions of the results

In any scientific study claiming to be based on the ordinal scale, the examination of the normality of the distribution is an essential step because it is one of the conditions for applying linear regression. There are numerous tests in statistical literature that assess the hypothesis of the normality of a distribution. Some of these tests include the Shapiro test, the Kolmogorov-Smirnov test, the chi-square test, as well as the skewness and kurtosis technique. In our study, we opted for the Kolmogorov-Smirnov test due to its practicality and ease of interpretation. The corresponding indices are presented in the table below:

Table 4: Normality of distributions of results of the HAD Depression, Kessler Distress (K6) and Quality of Life scales (N=124)

	HAD	K6	QV
N	124	124	124
Kolmogorov-Smirnov Z	0.883	1,203	1,273
Asymptotic significance (bilateral)	0.316	0.102	0.078
Decision	Norm.	Norm.	Norm.

Caption: HAD: Hospital Anxiety and Depression; K6: Kessler Distress; QV: Quality of Life
Reading Table 4 indicates that the distributions related to all dimensions of the HAD

Depression, Kessler Distress (K6) and Quality of Life assessment scales are normal because the different probabilities associated with them are greater than the critical probability at the 5% significance level (0.05). Therefore, for these distributions, the use of parametric tests with regard to differential analysis (Student's t and analysis of variances), is justified.

3.4.2 Study of the homogeneity of the study variances

The statistical literature suggests that parametric tests necessitate homogeneity of variances. Therefore, in our study, it was crucial to employ Levene's F test. This test was selected due to its superior statistical power compared to other tests. The statistical indices associated with it are outlined in the table below.

Table 5: Study of the homogeneity of variances linked to the dimensions of the HAD Depression, Kessler Distress (K6) and Quality of Life scales (N=124)

Variables	Dimensions of the scales	F de Levene	Sig.
Sex	HAD	0.015	0.904
	K6	2,514	0.117
	QV	0.589	0.557
Age	HAD	0.193	0.661
	K6	0.582	0.629
	QV	2,472	0.119
Level of education	HAD	0.199	0.820
	K6	0.180	0.910
	QV	1,210	0.311
Religious denomination	HAD	0.078	0.925
	K6	0.643	0.425
	QV	1,241	0.268
Marital status	HAD	0.053	0.984
	K6	2,164	0.100
	QV	0.276	0.760

Legend: HAD: Hospital Anxiety and Depression; K6: Kessler Distress; QV: Quality of Life.
Reading Table 5 informs us that all the variances of different dimensions of the HAD

Depression, Kessler Distress (K6) and Quality of Life assessment scales as a function of the intermediate variables of our study are all homogeneous because the associated probabilities are greater than the critical probability (0.05). Consequently, for these distributions, the use of parametric tests at the level of differential analysis is therefore permitted.

3.5 Differential analysis of results

3.5.1 Effect of the sex variable on the study results

The data for the sex variable are divided into two categories. These are men and women, whose respective means are shown in the table below. These means are compared two by two using Student's t-test.

Table 13: Effect of the sex variable on the results of the study

Sex	Ind. Stat.	HAD	K6	QV
Male (N=91)	Average	24.34	14.33	72.54
	Standard deviation	9,747	3,081	6,181
Female (N=33)	Average	30.42	13.15	72.18
	Standard deviation	7,416	3,355	4,680
Total (N=124)	Average	25.96	14.02	72.44
	Standard deviation	9,545	3,185	5,803
Student's t-test		3,257	1,838	0.301
Degree of freedom		122	122	122
Bilateral meaning.		0.001	0.069	0.764
Decision		Significant	Not significant	Not significant

The results of this table show that at first glance, female subjects are more anxious and depressed (M=30.42) compared to male subjects. On the other hand, male subjects are in great distress compared to female subjects (M=14.33) but also have a higher quality of life (M=72.54). However, these observed differences are only confirmed from a statistical point of view at the level of the HAD scale because the probability associated with the Student t-test (0.001) is far lower than the critical probability at the significance level of 5% (p.0.05). In other words, women are more anxious and depressed than men.

3.5.2 Effect of the age variable on the study results

Table 6. Effect of the age variable on the study results

Age group	Ind. Stat.	HAD	K6	QV
18 to 25 years old (N=11)	Average	12.00	14.91	71.27
	Standard deviation	3,821	3,754	8,945
26 to 33 years old (N=23)	Average	24.74	14.26	73.35
	Standard deviation	9,216	3,387	6,095
34 years and over (N=90)	Average	27.98	13.84	72.36
	Standard deviation	8,643	3,075	5,290
Total	Average	25.96	14.02	72.44

(N=124)	Standard deviation	9,545	3,185	5,803
F of Snedécor		17,771	0.627	0.509
Intergroup degree of freedom		2	2	2
Intragroup degree of freedom		121	121	121
Degree of freedom		123	123	123
Bilateral meaning.		0.000	0.536	0.602
Decision		Significant	Not significant	Not significant

The data in this table indicates that individuals aged 34 years or older exhibit higher levels of anxiety and depression (M=27.98) compared to other age groups. Those between 18 and 25 show higher psychological distress (M=14.91), while individuals aged 26 to 33 report better overall well-being (M=73.35). These differences are statistically significant based on the HAD scale, with a probability associated with Snédecor's F-Ratios of 0.000, which is below the critical probability of 5% ($p < 0.05$). In summary, individuals aged 34 years and older experience higher levels of anxiety and depression compared to other age groups.

3.5.3 Effect of the variable level of education on the results of the study

Table 7. Effect of the variable level of education on the results

Level of education	Ind.Stat.	HAD	K6	QV
None	Average	12.00	14.91	71.27
(N=11)	Standard deviation	3,821	3,754	8,945
Primary	Average	27.40	14.40	72.80
(N=5)	Standard deviation	4,278	0.894	7,662
Secondary	Average	14.57	11.29	68.57
(N=7)	Standard deviation	1,272	4,071	4,995
Professional	Average	30.25	10.75	70.50
(N=16)	Standard deviation	9,263	3,215	5,317
University	Average	27.81	14.72	73.26
(N=85)	Standard deviation	8,482	2,617	5,228
Total	Average	25.96	14.02	72.44
(N=124)	Standard deviation	9,545	3,185	5,803
F of Snedécor		14,357	8,377	1,810
Intergroup degree of freedom		4	4	4

Intragroup degree of freedom	119	119	119
Degree of freedom	123	123	123
Bilateral meaning.	0.000	0.000	0.131
Decision	Significant	Significant	Not significant

The data presented in this table indicates that individuals with a professional level of education exhibit higher levels of anxiety and depression ($M=30.25$) compared to others. Conversely, those with no education level show greater psychological distress ($M=14.91$) while university-educated individuals report the lowest levels of distress ($M=73.26$). These differences are statistically significant based on the HAD and K6 scales, as indicated by the Snédecor's F-Ratios (0.000) being below the critical probability threshold of 5% ($p<0.05$). In summary, individuals with a professional education level experience the highest levels of anxiety and depression, while those with no education level experience greater psychological distress.

3.5.4 Effect of the religious confession variable on the results of the study

Table 8. Effect of the religious confession variable on the results

Religious Conf	Ind. Stat.	HAD	K6	QV
Catholic	Average	26.22	13.54	71.71
(N=78)	Standard deviation		10,278	3,3025,247
Protestant	Average	22.48	14.78	72.83
(N=23)	Standard deviation	8,295	2,969	6,610
Awak	Average	27.82	15.88	76.65
(N=17)	Standard deviation	6,376	1,728	6,164
Kimbanguist	Average	30.67	12.00	68.67
(N=6)	Standard deviation	9,309	3,225	2,066
Total	Average	25.96	14.02	72.44
(N=124)	Standard deviation	9,545	3,185	5,803
F of Snedécor		1,774	4,056	4,655
Intergroup degree of freedom		3	3	3
Intragroup degree of freedom		120	120	120
Degree of freedom		123	123	123
Bilateral meaning.		0.156	0.009	0.004
Decision	Not significant	Significant	Significant	

The data from this table indicates that Kimbanguist subjects appear to have higher levels of anxiety and depression compared to others ($M=30.67$). Conversely, subjects from revival churches exhibit elevated psychological distress ($M=15.88$) and report a better quality of life (76.65). It is important to highlight that these differences are statistically significant based on the K6 scale and quality of life measures, as indicated by the low probabilities associated with Snédecor's F-Ratios (0.009 and 0.004), which are below the critical probability of 5% ($p<0.05$).

3.5.5 Effect of the Marital Status variable on the study

Table 9. Effect of the Marital Status variable on the results

Marital status	Ind.Stat.	HAD	K6	QV
Bachelor	Average	21.00	14.04	72.32
(N=47)	Standard deviation	10,628	3,520	6,231
Bride)	Average	30.27	14.31	72.71
(N=52)	Standard deviation	6,855	2,422	5,525
Divorced	Average	25.13	13.74	72.57
(N=23)	Standard deviation	7,015	3,828	5,783
Widower(ve)	Average	40.00	9.00	67.00
(N=2)	Standard deviation	,000	,000	,000
Total	Average	25.96	14.02	72.44
(N=124)	Standard deviation	9,545	3,185	5,803
F of Snedécor		11,675	1,898	0.628
Intergroup degree of freedom		3	3	3
Intragroup degree of freedom		120	120	120
Degree of freedom		123	123	123
Bilateral meaning.		0.000	0.134	0.598
Decision		Significant	Not significant	Not significant

The results in this table indicate that widowed individuals exhibit higher levels of anxiety and depression ($M=40.00$) compared to other groups. Conversely, married individuals experience more psychological distress ($M=14.31$) but report a higher overall quality of life ($M=72.71$). These differences are statistically significant based on the Snédecor's F-Ratios (0.000), indicating that widowed individuals are indeed more anxious and depressed than others.

3.6 Relationship between anxiety, depression, psychological distress and quality of life.*Table 10. Bilateral correlation*

	Correlation	Anxiety	Depression	Distress Psychological	Quality of life
Anxiety	r de Bravais				
	Pearson				
	Sig. (2-tailed)				
Depression	r de Bravais	0.034			
	Pearson				
	Sig. (2-tailed)	0.541			
Psychological Distress	r de Bravais	0.293**	-0.002		
	Pearson				
	Sig. (2-tailed)	0.484	0.978		
Quality of life	r de Bravais	-0.270**	-0.328**	-0.585**	
	Pearson				
	Sig. (2-tailed)	0.002	0.000	0.000	

It is read from the reading of the results that psychological distress correlates positively and very significantly with anxiety ($r=0.293^{**}$). In addition, anxiety, depression, psychological distress correlate negatively and very significantly with quality of life. In other words, the more anxious ($r = -0.270^{**}$), depressed ($r = -0.328^{**}$) and psychologically distressed ($r = -0.585$) the subjects are, the poorer their quality of life is and vice versa.

4.0 DISCUSSION OF RESULTS

The objective of this section is to compare our results with those of previous studies. Overall, the results of our study reveal significant differences between the two types of management in patients suffering from arterial hypertension: medical management only and holistic management, which includes medical and psychological aspects.

Regarding anxiety and depression, the results indicate that holistic care is effective. The average scores for anxiety (17.67) and depression (16.23) in subjects with high blood pressure under medical management only suggest a certain level of symptomatology, consistent with the observation that hypertensive patients often have psychiatric comorbidities, particularly anxiety and depression (Smith et al., 2018). These disorders may be related to chronic stress caused by the disease and its constraints (Katon, 2011). In contrast, patients receiving holistic care have significantly lower scores (anxiety 10.38; depression 8.14), indicating a less pronounced symptomatology. This difference suggests that holistic care, which includes psychological aspects, helps alleviate anxiety and depressive symptoms. This is supported by the work of Cohen et al. (2017), which shows that multidimensional interventions (psychotherapy, social support, stress management) significantly improve mental health in chronic patients.

In the same logic, Engel's biopsychosocial model (1977) postulates that illness cannot be understood solely from a biological perspective but must integrate psychological and social dimensions. Holistic care, therefore, acts on these different levels, reducing perceived stress and improving emotional regulation, which reduces anxiety and depression.

The results of our study also demonstrate that psychological distress is severe in both groups but more pronounced in patients under medical care only. This is justified by the fact that the study subjects obtained high mean scores on the psychological distress scale in both groups (14.69 vs. 13.30), exceeding the critical threshold (13), indicating severe distress. This confirms that high blood pressure is associated with a heavy psychological burden, as highlighted in several studies, in particular (Mills et al., 2016). However, distress is higher among patients receiving medical management alone.

The findings suggest that holistic management offers emotional support and coping strategies, such as relaxation and cognitive behavioral therapies, which help reduce distress in hypertensive patients (Baker et al., 2019).

According to Lazarus and Folkman's stress and coping theory (1984), the ability to manage stress depends on available resources. Holistic indicate that holistic care is more effective than medical care alone in reducing anxiety, depression, and psychological distress in hypertensive patients while promoting a more balanced overall well-being. care enhances these resources, leading to better stress management and psychological well-being.

In terms of overall well-being, both groups showed high levels of well-being, with some differences in specific dimensions. The group receiving medical care had higher scores in environmental mastery and positive relationships but lower scores in self-acceptance and meaning in life. On the other hand, the group under holistic care had more balanced scores, including higher self-acceptance and greater meaning in life.

These differences suggest that holistic care promotes better psychological and existential integration, aligning with Ryff's work on psychological well-being. The results

5.0 CONCLUSION

In conclusion, patients with high blood pressure who receive holistic care, including medical and psychological support, show lower levels of anxiety and depression, higher psychological well-being, and reduced psychological distress compared to those receiving only medical care. These findings highlight the positive impact of psychological care on hypertensive patients.

Based on these findings, we recommend the inclusion of clinical psychologists in healthcare facilities in the DR Congo to provide psychological support for patients with high blood pressure.

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