



# FREQUENCY AND FACTORS ASSOCIATED WITH MUSCLE AND JOINT PAIN IN CLIMACTERIC AFRO-DESCENDANTS OF THE COLOMBIAN CARIBBEAN



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Investigation Group: Salud de la Mujer, Universidad de Cartagena, Colombia

No conflicts of interest

I have no financial relationships to disclose

# CONTEXT

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More than 200 million Afro-descendant live in the Americas and many millions more live on continents other than Africa

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They have a long history of displacement, vulnerability and inequality in accessing health services

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When considering their social inclusion, the right to be scientifically studied should be involved and thus, to be able to give recommendations for their well-being

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Studies on quality of life, climacteric and menopausal symptoms in Afro-descendant women are warranted

# OBJECTIVE

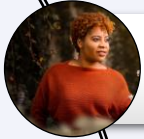
To estimate the frequency of muscle and joint pain and to identify its associated factors in climacteric women of African descent



# METHODS



Cross-sectional study that is part of the CAVIMEC project [Quality of life in menopause and Colombian ethnic groups]. The project was approved by the ethics committee of the University of Cartagena, Colombia



420 climacteric Afro-descendants (40-59y), residents of the Colombian Caribbean



Exclusion criteria: Women with limited walking, rheumatic pathologies and previous surgeries on extremities



1. Sociodemographic variables; 2. Anthropometric measurements (weight, height, abdominal and hip circumference); 3. It applied MRS to identify menopausal symptoms



Statistical Analysis: Epi-info-7



Adjusted logistic regression was performed: Muscle and Joint Pain (dependent variable) with other menopausal symptoms, age, DM, HBP, obesity, overweight, and menopausal status (independent variables)



The Spearman Correlation Coefficient ( $\rho$ ) was calculated between the score of item eleven of MRS that questions MJP with the quantitative variables

# METHODS

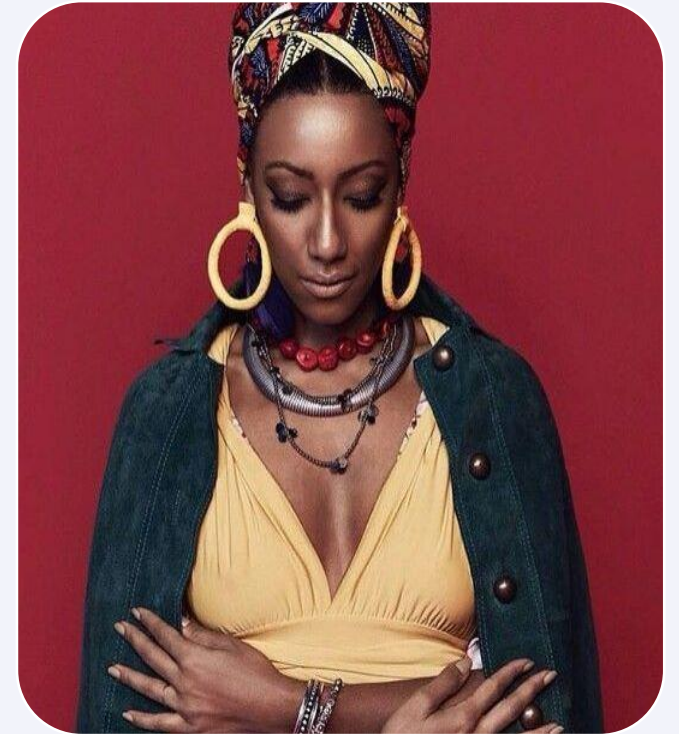
## MRS SCALE (Menopause Rating Scale)

Which of the following discomforts do you currently feel and how often?	Absent	Mild	Moderate	Severe	Very severe
	1. Hot flashes (hot flashes, sweating, hot flashes)	0	1	2	3
2. Cardiac complaints (feeling heartbeat, palpitations, tightness)	0	1	2	3	4
3. Sleep problems (insomnia, little sleep)	0	1	2	3	4
4. Depressed mood (feeling depressed, down, sad, about to cry, not wanting to live)	0	1	2	3	4
5. Irritability (feeling tense, snapping easily, feeling angry, feeling intolerant)	0	1	2	3	4
6. Anxiety (feeling anxious, fearful, restless, tendency to panic)	0	1	2	3	4
7. Physical and mental fatigue (performs less, gets tired easily, forgets frequently, has poor memory, has trouble concentrating)	0	1	2	3	4
8. Sexual problems (less desire for sex, less frequency of sexual intercourse, less sexual satisfaction)	0	1	2	3	4
9. Bladder problems (problems urinating, urinating more often, urgency when urinating, leaking urine)	0	1	2	3	4
10. Vaginal dryness (sensation of dry genitalia, discomfort or burning in the genitals, discomfort or pain with sexual intercourse)	0	1	2	3	4
11. Musculo-articular pain (bone and joint pain, rheumatic pain)	0	1	2	3	4

# OUTCOMES

Sociodemographic characteristics. Quantitative variables				
	All n=420	without Muscle and Joint Pain n= 177 (42.1%)	with Muscle and Joint Pain n= 243 (57.9%)	p*
	X ± SD			
Age, years	50.0 ± 6.1	48.7 ± 6.2	51.2 ± 5.8	<0.001
Years of study	5.7 ± 3.6	5.9 ± 3.6	5.6 ± 3.6	0.45
Weight, kg	66.1 ± 12.2	63.8 ± 11.4	67.9 ± 12.5	<0.001
Abdominal perimeter, cm	94.5 ± 14.8	90.0 ± 14.1	97.8 ± 14.5	<0.001
Hip circumference, cm	102.6 ± 14.4	98.0 ± 13.7	106.0 ± 13.9	<0.001
Waist/hip ratio	0.9 ± 0.05	0.9 ± 0.0	0.9 ± 0.0	0.55
Body mass index, kg/m <sup>2</sup>	25.4 ± 3.8	24.7 ± 5.1	25.9 ± 4.9	0.01

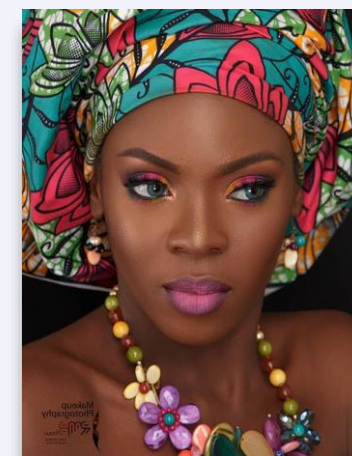
\*ANOVA



# OUTCOMES

## Sociodemographic characteristics. Qualitative variables

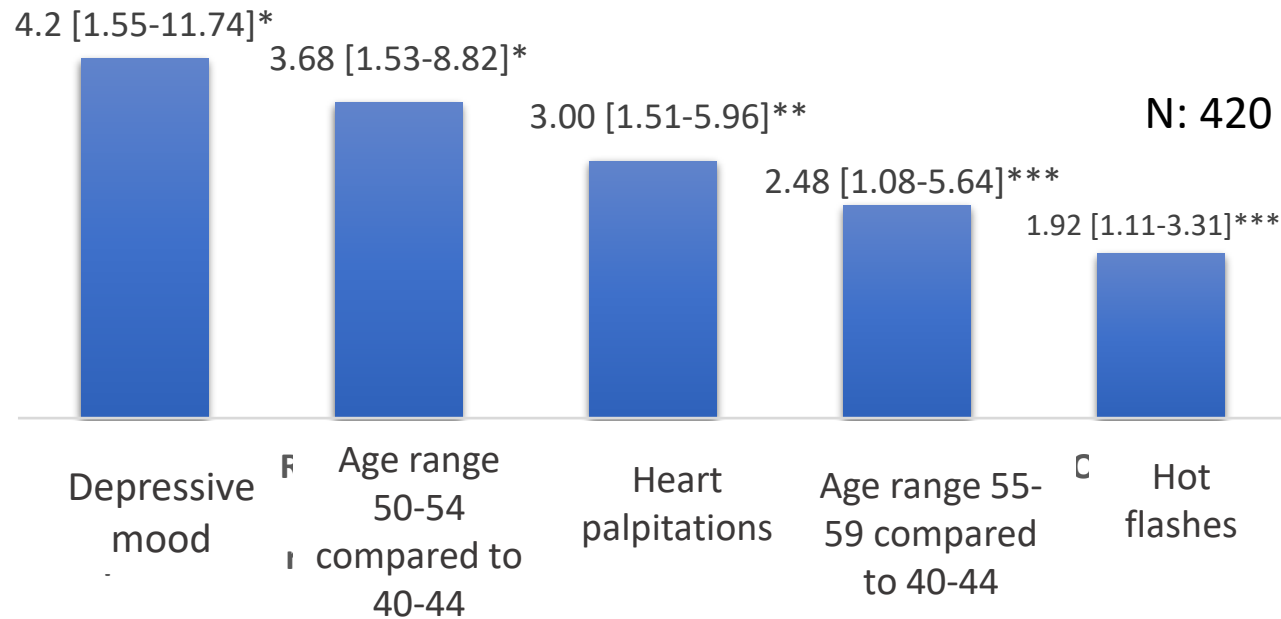
Variables		All N= 420	Without Muscle and Joint Pain N= 177 (42.1%)	With Muscle and Joint Pain N= 243 (57.9%)	p§
		No. (%) (95% CI)			
Menopausal state	Premenopausal	72 (17.1) (13.8-21.0)	45 (25.4) (19.1-32.5)	27 (11.1) (7.4-15.7)	<0.001
	Transition to menopause	252 (60.0) (55.2-64.5)	100 (56.5) (48.8-63.9)	152 (62.5) (56.1-68.6)	0.21
	Postmenopause	96 (22.8) (19.1-21.1)	32 (18.8) (12.7-24.5)	64 (26.3) (20.9-32.3)	0.04
Age range	40-44	101 (24.1) (20.2-28.4)	62 (35.0) (28.0-42.5)	39 (16.0) (11.6-21.2)	<0.001
	45-49	92 (21.9) (18.2-26.1)	42 (23.3) (17.6-30.6)	50 (20.5) (15.6-26.2)	0.44
	50-54	93 (22.1) (18.4-26.3)	25 (14.1) (9.3-20.1)	68 (27.9) (22.4-34.0)	<0.001
	55-59	134 (31.9) (27.6-36.5)	48 (27.1) (20.7-34.3)	86 (35.3) (29.3-41.7)	0.07
Marital status	Single/not in a relationship	105 (25.0) (21.1-29.3)	44 (24.8) (18.6-31.9)	61 (25.1) (19.7-31.0)	0.95
	Married/ in union	287 (68.3) (63.7-72.6)	124 (70.0) (62.7-76.7)	163 (67.0) (60.7-72.9)	0.51
Level of study	Primary	231 (55.0) (50.2-59.6)	94 (53.1) (45.4-60.6)	137 (56.3) (49.8-62.7)	0.50
	Secondary	176 (41.9) (37.2-46.6)	76 (42.9) (35.5-50.5)	100 (41.1) (34.9-47.6)	0.71
	Superior	13 (3.1) (1.8-5.2)	7 (3.9) (1.6-7.9)	6 (2.4) (0.9-5.3)	0.38
Nutritional condition	Normal	181 (43.1) (38.4-47.8)	91 (51.4) (43.8-58.9)	90 (37.0) (30.9-43.4)	0.003
	Overweight	159 (37.8) (33.3-42.5)	61 (34.4) (27.4-41.9)	98 (40.3) (34.1-46.7)	0.22
	Obesity	55 (13.1) (10.2-16.6)	15 (8.4) (4.8-13.5)	40 (16.4) (12.0-21.7)	0.01
	Underweight	25 (5.9) (4.0-8.6)	10 (5.6) (2.7-10.1)	15 (6.1) (3.5-9.9)	0.82
Metabolic risk†	Low	72 (17.1) (13.8-21.0)	43 (24.2) (18.1-31.3)	29 (11.9) (8.1-16.6)	<0.001
	Increased	72 (17.1) (13.8-21.0)	36 (20.3) (14.6-27.0)	36 (14.8) (10.6-19.9)	0.13
	Very increased	276 (65.7) (61.0-70.0)	98 (55.3) (47.7-62.8)	178 (73.2) (67.2-78.7)	<0.001
smoking habit	Current	84 (20.0) (16.4-24.0)	43 (24.2) (18.1-31.3)	41 (16.8) (12.3-22.1)	0.06
	Before	56 (13.3) (10.4-16.9)	16 (9.0) (5.2-14.2)	40 (16.4) (12.0-21.7)	0.02
	Never	280 (66.6) (62.0-71.0)	118 (66.6) (59.2-73.5)	162 (66.6) (60.3-72.5)	1.00
Abdominal obesity†	348 (82.8) (78.9-86.1)	134 (75.7) (68.7-81.8)	214 (88.0) (83.3-91.8)	<0.001	
Hysterectomy	29 (6.9) (4.8-9.7)	10 (5.6) (2.7-10.1)	19 (7.8) (4.7-11.9)	0.38	
Bilateral oophorectomy	8 (1.9) (0.9-3.7)	2 (1.1) (0.1-4.0)	6 (2.4) (0.9-5.3)	0.10	
Diabetes mellitus	46 (10.9) (8.3-14.3)	8 (4.5) (1.9-8.7)	38 (15.6) (11.3-20.8)	<0.001	
Arterial hypertension	129 (30.7) (26.4-35.2)	38 (21.4) (15.6-28.2)	91 (37.4) (31.3-43.8)	<0.001	



§Chi squared. †Established by waist circumference.

# OUTCOMES

Factors Associated with Muscle and Joint Pain in Women Of Afro-Descendent Climacteric. Regression Logistics Adjusted.



Data presented in OR [95% CI]. (\*) p<0.001. (\*\*) p=0.001. (\*\*\*) p<0.05.

Several included in the model: vaginal dryness, sexual problems, irritability, heart palpitations, anxiety, sleep problems, physical/mental exhaustion, hot flashes, age range 50-54 versus 40-44, diabetes mellitus, postmenopausal vs. premenopausal, depressed mood, age range 55-59 compared to 40-44, obesity, transition to menopause vs. premenopause, arterial hypertension, age range 45-49 compared to 40-44, and overweight.

Correlation with Muscle and Joint Pain.

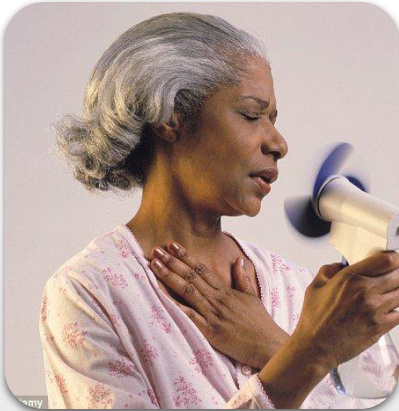
Spearman's coefficient

Variable	rho	95% CI	p
Waist circumference	0.322	0.233 to 0.405	<0.001
Hip circumference	0.318	0.229 to 0.401	
Age	0.212	0.119 to 0.302	
Weight	0.183	0.088 to 0.274	
BMI	0.173	0.078 to 0.264	
Waist/hip ratio	0.129	0.033 to 0.222	

# CONCLUSIONS



**A high frequency of Muscle and Joint Pain was observed in a group of climacteric women of African descent from the Colombian Caribbean**



**Aging**

**Psychological (depressed mood)**

**Somato/vegetative symptoms (hot flashes and heart palpitations)**

**Waist and hip circumference**




**were significantly associated with Muscle and Joint Pain**



## TRABAJOS ORIGINALES

Rev Obstet Ginecol Venez. 2022; 82 (1): 47-58.  
<https://doi.org/10.51288/00820107>

# Factores asociados a dolores musculares y articulares en mujeres afrodescendientes climatéricas

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### RESUMEN

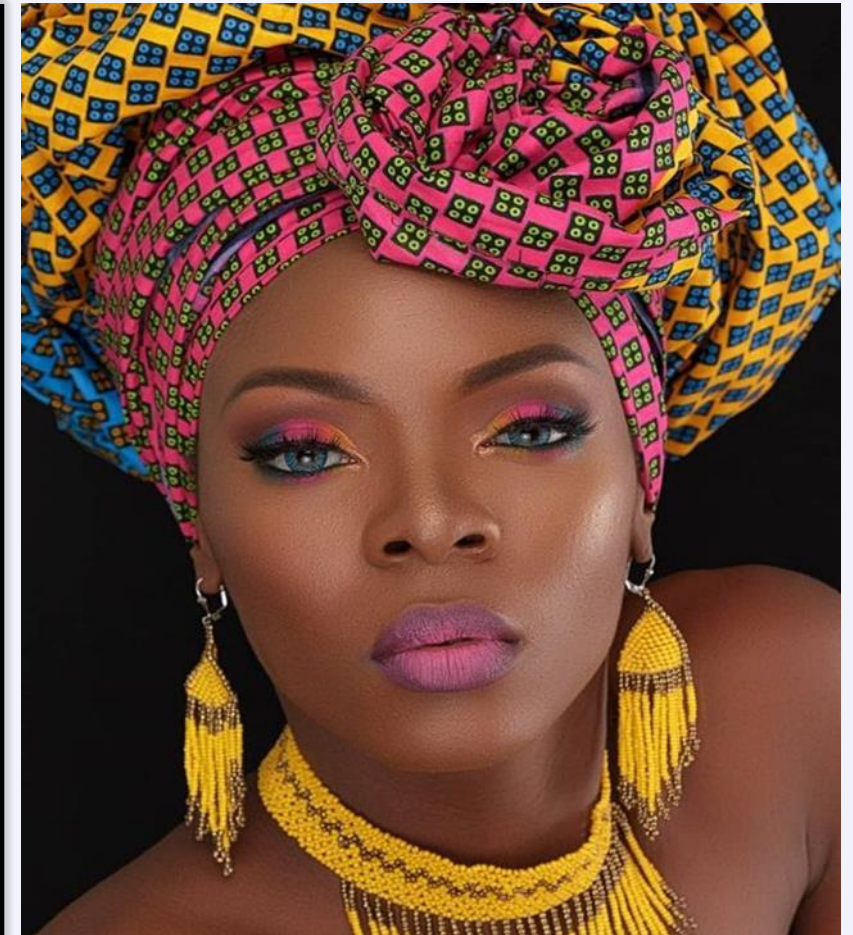
**Objetivo:** Estimar la frecuencia de los dolores musculares y articulares e identificar si otros síntomas menopáusicos, la edad, la condición nutricional, el riesgo metabólico y el estado menopáusico, fueron factores asociados.

**Métodos:** Estudio transversal que hace parte del proyecto CAVIMEC (Calidad de vida en la menopausia y Etnias Colombianas), fue realizado en climatéricas afrodescendientes, edad entre 40-59 años y residentes en el Caribe colombiano. Fueron encuestadas en sus propias residencias, previo consentimiento informado. Se aplicó Menopause Rating Scale, herramienta que explora síntomas menopáusicos. Se realizó regresión logística y se estimó el coeficiente de correlación de Spearman. Valor de  $p < 0,05$  fue estadísticamente significativo.

**Resultados:** Se estudiaron 420 mujeres. Edad:  $50,0 \pm 6,1$  años. El 22,8 % posmenopáusicas y el 82,8 % con obesidad abdominal; 243 (57,9 %) presentaban dolores musculares y articulares. Todos los síntomas menopáusicos fueron más frecuentes entre las mujeres con dolores musculares y articulares: estado de ánimo depresivo (OR: 4,20/IC 95 %: 1,55-11,74), edad 50-54 años (OR: 3,68/IC 95 %: 1,53-8,82), palpitaciones cardiacas (OR: 3,00/IC 95 %: 1,51-5,98), edad 55-50 años (OR: 2,48/IC 95 %: 1,08-5,64) y oleadas de calor (OR: 1,92/IC 95 %: 1,11-3,31) se asociaron con dolores musculares y articulares. Igual se observó con el perímetro abdominal (OR: 0,322/IC 95 %: 0,233-0,405) y el perímetro de la cadera (OR: 0,318/IC 95 %: 0,229-0,401).

**Conclusiones:** Se observó elevada frecuencia de dolores musculares y articulares. El envejecimiento, síntomas psicológicos y somato/vegetativos, así como el perímetro abdominal y de la cadera, se asociaron significativamente con los dolores musculares y articulares.

**Palabras clave:** Climaterio; Menopausia, Artralgia, Grupos Étnicos, Grupo de ascendencia continental Africana.





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