# **Typology of Chronic Pain Among Overweight Mexican Americans**

# Background

- Obesity and chronic pain are both major public health conditions of increasing prevalence, particularly among disadvantaged Hispanics in the United States.
- Having a better understanding of the intersection between chronic pain and obesity among the Mexican American community can be valuable for public health professionals in determining appropriate treatment, service provision, and prevention programs.

# Objective

 To describe the location, severity, and bothersomeness of chronic pain among low-income, overweight or obese Hispanic adults with chronic pain.

# Methods

- Using a community-based participatory research (CBPR) method, trained promotores interviewed 101 Hispanic (predominately Mexican American) participants in Spanish about varying health indices: health status; type, severity, and bothersomeness of pain; access to care; acculturation; social support; self-efficacy; psychological distress; and physical activity level. Questions were translated into Spanish using translation/back translation methods.
- Pain indices were intensity (0-10 scale), pain troublesomeness (PT; 14-item scale, range = 0 - 70), *number of pain sites* (sum of PT scores > 0 for 14 sites), *presence* of widespread pain (pain above/below the waist AND on left/right sides of body for > 3 months), and *pain interference* (whether pain interfered, during last 4 weeks, with normal work using 5-level response set, not at all to extremely).
- Participants were measured for BMI and waist circumference (WC). BMI categories used were: overweight 25 - <30; obese 30 - <40; extremely obese  $\ge$  40. WC was acquired using a standard protocol (location: two fingerbreadths above iliac crest).

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# Results

- <u>Table 1</u> presents key characteristics of the 101 participants shown in age categories (40-49, 50-59, 60+). Most were female (80%), born in Mexico (97%), and ranged in age from 40 to 79 (M = 52).
- A substantial number suffered from chronic medical conditions such as diabetes (50%), cardiovascular disease (52%), rheumatic conditions (30%), and uncorrected visual problems (21%). A minority reported rheumatoid (9%) or nonrheumatoid (13%) arthritis, fibromyalgia (2%), or neuropathies (9%).
- As shown in <u>Table 2</u>, most participants (60%) reported chronic widespread pain. The mean number of pain sites was 8.4 (SD=3.3), with 87 participants reporting 5 or more locations. Pain intensity for the past week averaged 6.84 (SD=2.4; 0-10 scale) with 60% of subjects suffering severe pain (>7). About two thirds of the sample reported moderate or greater pain interference with work.
- As seen in Table 3, the most common pain location was head (80%), followed by knee and upper back (both 75%), shoulder (74%) and lower back (73%).



**Community-based participatory research team** 

#### TABLE 1 - Sample (n = 101) Demographic Characteristics, Acculturation, Anthropometri es, Health Status, and Access to Healthcare by Age Group (40-49; 50-59; 60+)

		Age Group (40-49; 50-59; 60+) Mean (SD) or %		
	40-49	50-59	60+	
Demographic characteristics	N = 46	N = 36	N = 19	
Gender, Female	85	81	68	
Education (# of years)*	7.7 (3.8)	6.1 (3.3)	4.1 (3.7)	
Current marital status*				
Never married	33	22	21	
Divorced/separated	22	3	5	
Widowed	2	11	21	
Married	44	64	53	
Current employment status				
Working fulltime	13	19	16	
Working parttime	26	19	21	
Looking for work or on temporary leave	34	39	10	
Permanently disabled or retired	2	6	16	
Other	24	17	37	
Acculturation				
Age when moved to US***	24.2 (8.4)	32.5 (9.4)	42.8 (15.1)	
Years in US	19.7 (7.7)	21.5 (8.2)	22.0 (14.0)	
Anthropometric measures				
BMI (calculated from height and weight)				
Overweight (25-29.5)	28	28	21	
Obese (30-39.5)	57	44	68	
Extremely obese (39.6 or greater)	15	28	11	
Waist circumference (inches)	42.7 (5.8)	43.5 (5.5)	43.4 (4.8)	
Health status				
Depressive symptoms	7.4 (5.1)	7.4 (4.9)	4.6 (5.2)	
General quality of life				
Excellent	4	3	16	
Very good	11	3	0	
Good	50	67	74	
Fair	28	22	5	
Poor	7	6	5	
Short-Form 12, Health Status				
Physical function	39.4 (9.0)	39.0 (8.2)	36.0 (10.1)	
Mental function	42.6 (10.8)	44.3 (11.2)	44.3 (10.8)	
Diabetes	41	50	58	
Cardiovascular condition (heart attack, transient ischemic attack, angina,	26	67	63	
hypertension, stroke, peripheral vascular disease)**				
Respiratory disease	11	22	5	
Neuropathy or Parkinson's disease or multiple sclerosis	7	11	21	
Rheumatoid or chronic pain condition (arthritis, rheumatoid or other;	15	28	47	
fibromyalgia, joint replacement)*				
Uncorrected vision problems	24	33	16	
Inner ear problems/recurrent ear infections	11	36	19	
Respiratory disease	11	22	5	
Osteoporosis	4	11	11	
Psychiatric conditions	2	0	0	
Other <sup>a</sup>	22	36	37	
Access to Healthcare in Past 12 Months				
Had visited the following				
Medical doctor	85	97	95	
Other medically trained professional*	63	72	89	
Emergency room, urgent care center, hospital	17	33	21	
Health care provider in Mexico	4	6	5	
Traditional healer such as curandero or botanica	15	3	5	
Other (examples <i>sobador</i> – masseuse, support group)	11	3	5	
Needed to see doctor, but did not go	59	53	32	
	10	47	26	
Was prescribed or given medication, but did not get or take medication	48			
Was prescribed or given medication, but did not get or take medication Payment method	48			
	74	61	37	
Payment method		61 14	37 16	
Payment method Cash or credit*	74			
Payment method Cash or credit* Private health insurance or HMO	74 9	14	16	
Payment method Cash or credit* Private health insurance or HMO Medicare	74 9	14 3	16 11	

imples of conditions - high cholesterol, lupus, thyroid problems, specific pain sites or condition

\*p < .05; \*\* p < .001; \*\*\*p < .0001

#### **TABLE 2 - Pain Measures**

Pain Measures	
Percent of sample with chronic widespread pain ( > 3 months above below the waist and on both sides of the body)	ve a
Pain intensity (0 – 10 scale)	
Pain troublesomeness (14 sites; 0 to 5 response set with 5 = extren	nely

Number of pain sites

Percent of sample reporting moderate or greater pain interference ork during past 4 weeks

#### TABLE 3 - Location and Troublesomeness of Pain Symptoms during Past Month (n = 101)

	Troublesomeness						
Symptom	No pain	Not at all	Slightly	Moderately	Very	Extremely	M (SD)
Head ache	20	7	26	21	13	14	2.42 (1.6)
Neck pain	28	8	13	21	16	15	2.34 (1.8)
Jaw/teeth pain	48	14	14	5	12	8	1.44 (1.7)
Shoulder pain	27	2	14	22	15	21	2.58 (1.9)
Elbow pain	58	9	8	8	13	5	1.25 (1.7)
Wrist/hand pain	39	7	14	17	13	11	1.91 (1.8)
Chest pain	62	9	10	11	3	6	1.03 (1.5)
Abdominal pain	46	7	13	11	11	12	1.70 (1.9)
Upper back pain	26	5	15	17	16	22	2.57 (1.9)
Lower back pain	27	7	7	12	21	27	2.73 (2.0)
Hip/thigh pain	32	5	11	11	19	23	2.49 (2.0)
Knee pain	25	6	14	12	16	28	2.71 (2.0)
Ankle/foot pain	35	5	14	14	15	18	2.23 (1.9)
Other pain <sup>a</sup>	93	0	1	4	3	0	.34 (1.2)

*Note*. Numbers in columns 2-7 are percentages.

<sup>a</sup>Other pain sites mentioned: pelvis, bones, throat, face.

	Mean (SD) or %				
	40-49 N=46	50-59 N=36	60+ N=19		
and	70	58	42		
	6.9 (2.1)	7.3 (2.3)	5.8 (3.0)		
у	30.0 (13.4)	27.4 (15.2)	24.1 (13.2)		
	4 13 83	3 17 81	16 11 74		
ith	63	72	68		

## Conclusions

- We found substantial levels of troublesome and intense chronic pain from a variety of causal conditions in participants who were not using medical management for their pain.
- Our findings support results from several other studies indicating that obesity is associated with a variety of musculoskeletal conditions (e.g., low back pain, knee and hip osteoarthritis, headaches).
- Future research should focus on low-cost interventions to help prevent, screen and treat comorbid obesity and chronic pain to reduce physical frailty and permanent disabilities, and to improve quality of life, especially with vulnerable, minority populations.

## References

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