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Gaps in the Public's Knowledge About Chronic Pain: Representative Sample of Hispanic Residents From 5 States

Barbara J. Turner,[*,†] Yuanyuan Liang,[†,‡] Natalia Rodriguez,[†] Melissa A. Valerio,[†,§]
Andrea Rochat,[†] Jennifer S. Potter,[¶] and Paula Winkler[†,‖]

[*]Department of Medicine, [†]Center for Research to Advance Community Health (ReACH), [‡]Department of Epidemiology and Biostatistics, [¶]Department of Psychiatry, and [‖]South Central Area Health Education Center, University of Texas Health San Antonio, San Antonio, Texas.
[§]Department of Health Promotion and Behavioral Science, University of Texas School of Public Health in San Antonio, San Antonio, Texas.

Abstract: Educating the general public about chronic pain and its care is a national health priority. We evaluated knowledge, attitudes, and beliefs (KAB) of a 5-state, population-based sample of Hispanic individuals aged 35 to 75 years without chronic pain, representing more than 8.8 million persons. A Web-based survey assessed KAB using an adapted version of the Survey of Pain Attitudes-Brief and self-reported knowledge about chronic pain (nothing, a little, a lot). In unweighted analyses of participants (N = 349), the mean age was 52.0 (±10.6) years, 54% were women, 53% preferred Spanish, and 39% did not graduate from high school. More participants reported knowing nothing about chronic pain (24%) than a lot (12%). In weighted logistic models with knowing nothing as the reference, knowing a lot was associated with greater KAB for chronic pain-related emotions, functioning, and cure (all $P < .01$) but poorer KAB about pain medications ($P < .001$). Associations were similar for those knowing a little. Men and women preferring Spanish had poorer KAB about pain medications than men preferring English (both $P < .001$). In view of Hispanic individuals' disparities in chronic pain care, these data underscore the need for effective public educational campaigns about chronic pain.

***Perspective:** In this 5-state representative sample of Hispanic individuals without chronic pain, one-quarter reported knowing nothing about chronic pain and had poorer KAB about multiple aspects of this disease. This study reinforces the need to evaluate and address gaps in the general public's knowledge about chronic pain.*

***Key words:** Chronic pain, Hispanic, knowledge attitudes beliefs, representative sample.*

Chronic pain is among the most common diseases in the United States, with daily pain estimated to affect more than 25 million persons.[18] However, less than 20% of Americans consider chronic pain to be a serious health problem.[25] The need for a broad-based transformation in Americans' understanding about pain and its management was first highlighted in 2011 by the Institute of Medicine (IOM).[12] Specifically, the IOM recommended that educational programs address the general public's myths, misunderstandings, stereotypes, and stigma about pain. In 2016, the U.S. Department of Health and Human Services' (DHHS) National Pain Strategy recommended increasing clinicians' core competencies in pain care and initiating a national public awareness campaign about the effect, severity, and

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Current address for Yuanyuan Liang: Department of Epidemiology and Public Health, Division of Biostatistics and Bioinformatics, University of Maryland School of Medicine, Baltimore, Maryland.

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Address reprint requests to Barbara J. Turner, MD, MSEd, MA, MACP, Center for Research to Advance Community Health (ReACH), University of Texas Health San Antonio, 7411 John Smith Dr, Suite 1050, San Antonio, TX 78229. E-mail: turner@uthscsa.edu

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appropriate treatment of chronic pain.[20] Numerous studies have addressed clinicians' deficiencies and frustrations with chronic pain management[2,6,32,36] but, to our knowledge, no population-based studies have examined the general public's knowledge, attitudes, and beliefs (KAB) about chronic pain. These data are essential to informing educational interventions and other initiatives to increase the understanding of this complex disease, including the value of multimodal, evidence-based approaches to improve pain-related outcomes.

Research on KAB about chronic pain should focus first on populations reported to have the greatest disparities and challenges with chronic pain care. African-American and Hispanic individuals have well documented differences in pain care compared with non-Hispanic white individuals, including much more restricted treatment with opioid analgesics.[10,16]Although limited use of opioids is now understood to be desirable, African-American and Hispanic individuals have also been reported to be less likely to adopt complementary pain management therapies such as yoga and tai chi.[4] Receipt of multimodal chronic pain care is certainly impeded by access as well as cost barriers for Hispanic individuals because nearly one-third of nonelderly Hispanic individuals in the United States are uninsured.[5] Being uninsured also compromises treatment of pain-related conditions such as osteoarthritis.[5,37]

In this study, we studied a general population of Hispanic individuals without chronic pain to identify gaps in KAB regarding multiple aspects of chronic pain that must be addressed to promote more informed consumers of pain care. We asked about overall knowledge regarding chronic pain and examined associations with understanding about diverse aspects of chronic pain including: mental health effects, physical activities, cure, control, function, and medication.[31] We predicted that persons who claimed to have better knowledge about this condition would demonstrate greater KAB. However, in general, we expected to observe important deficiencies in KAB, reflecting a broader lack of understanding by the general public about this condition. This novel, broad-based study of persons without chronic pain about this underappreciated cause of morbidity and mortality in the United States should launch further population-based studies of KAB, with the ultimate goal of improving outcomes of this disease through a more educated general public about the myriad of effects of chronic pain and the need for a multimodal approach to its management.

Methods

Study Sample

Participants were recruited from an online research panel assembled by GfK Knowledge Networks (KnowledgePanel; GfK Custom Research, New York, NY).[8] The KnowledgePanel has been widely used in population-based surveys, including many other health-related studies.[1,11]To establish a nationally representative panel, KnowledgePanel members are recruited using probability-based sampling with random digit dialing and address-based sampling from the U.S. Postal Service's Delivery Sequence File. This combined approach maximizes population coverage and representation of hard-to-reach individuals, such as those from minority groups. The panel includes households with and without telephones, mobile phones, and home Internet access. Households without Internet access (35% of the sample) are given computer hardware and Internet capability as well as training in their use when they agree to serve on the KnowledgePanel. Census Block Groups with high-density minority communities were oversampled starting in 2009 and others were undersampled. Starting in 2010, sampling was further modified to target high-density Hispanic areas. The sample continues to recruit new members to maintain approximately 55,000 active panel members ready for survey participation.

GfK generates general population samples using an equal probability selection method.[8] First, the entire KnowledgePanel is weighted to the detailed geodemographic benchmarks of U.S. adults from the latest March supplement of the Current Population Survey.[33] This ensures that the weighted distribution of the KnowledgePanel perfectly matches that of U.S. adults. Second, a probability proportional to size procedure is used to select study-specific samples reflecting the measure of size for each panel member. This probability proportional to size methodology applied to the measure of size values produces fully self-weighing samples, for which each sample member can carry a design weight of unity. Where oversampling of specific subgroups is required, departures from an equal probability selection method design are corrected by adjusting the corresponding design weights, again with the Current Population Survey benchmarks serving as reference distributions.[33] Participants for our Web-enabled survey were recruited from all 1,007 KnowledgePanel members who were eligible on the basis of the following characteristics: Hispanic ethnicity, age 35 to 75 years, and residence in 1 of 5 southwestern states (California, Texas, Arizona, Nevada, and New Mexico). The entire sampling frame of persons with these characteristics (including persons with and without chronic pain) represents 11,016,135 U.S. adults. All eligible 1,007 KnowledgePanel members received a link via e-mail that allowed them to access the online survey or visit their online member page. The survey was open for 18 days, by which time response rates had declined rapidly.

More than half of the sample—516 sample members, or 51.2%—responded to the survey invitation. All were considered eligible except for the following exclusions: 1) cancer pain diagnosed by a health care clinician, and 2) neither Spanish nor English speaking. Nearly all of the sample members—486 eligible participants (94%)—were qualified and completed the survey. Respondents were categorized into 3 groups on the basis of responses to survey questions about chronic pain: 1) affected by chronic pain from responses that they had pain on most days or nights for at least 3 months affecting daily activities, 2) caregivers of persons with chronic pain, and 3) members who denied having chronic pain or