

# Perceptions, Attitudes, and Barriers to Obesity Care in Mexico: Data From the ACTION-IO Study

Verónica Vázquez-Velázquez<sup>1</sup>, Hugo Laviada-Molina<sup>2</sup>, Eduardo García-García<sup>1</sup>, Edurne Sandoval-Diez<sup>3</sup>, and Leonardo Mancillas-Adame<sup>4</sup>

**Objective:** The Awareness, Care, and Treatment in Obesity Management–International Observation (ACTION-IO) study (ClinicalTrials.gov identifier NCT03584191) aimed to identify perceptions, attitudes, behaviors, and barriers to effective obesity care in people with obesity (PwO) and health care professionals (HCPs). This study presents the results from Mexico.

**Methods:** An online survey was conducted. In Mexico, eligible PwO were  $\geq 18$  years of age with BMI  $\geq 30$  kg/m<sup>2</sup> based on self-reported height and weight. Eligible HCPs had direct patient care.

**Results:** The survey was completed by 2,000 PwO and 400 HCPs in Mexico. Many PwO (71%) and HCPs (94%) categorized obesity as a chronic disease. Sixty-three percent of PwO felt motivated to lose weight, but many HCPs perceived that PwO were not interested in losing weight (76%) or motivated to lose weight (69%). Lack of financial means to support weight-loss efforts was a barrier for PwO (34%) to discussing weight with HCPs. Sixty-five percent of PwO had discussed weight with HCPs in the past 5 years. PwO (80%) and HCPs (89%) considered lack of exercise as the main barrier to weight loss. Few PwO (34%) had successfully lost  $\geq 5\%$  of their body mass over the past 3 years.

**Conclusions:** This ACTION-IO study in Mexico identified discrepancies in the perceptions of PwO and HCPs, highlighting opportunities for further education and patient-centered approaches.

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## Introduction

Obesity is a chronic, progressive disease, with a rising prevalence globally (1,2). Mexico had the second highest prevalence rate in obesity among countries that are part of the Organisation for Economic Co-operation and Development (OECD) in 2018 (3). From a national perspective, 72.5% of adults aged  $\geq 20$  years old had overweight (39.2%) or obesity (33.3%) (4). Obesity is associated with multiple comorbidities and complications, including type 2 diabetes, hypertension, cardiovascular disease, chronic kidney disease, musculoskeletal disorders, and cancer (5), that represent a significant percentage of the national health budget in Mexico (3), and obesity is also a key risk factor for vulnerability to coronavirus disease 2019 (6).

In 2016, Mexico declared obesity as an epidemiological emergency because of high prevalence rates, with the expectation that diagnosis and control of the disease would

## Study Importance

### What is already known?

- Obesity is a chronic disease reaching epidemic proportions, which can lead to the development of comorbidities, but prevention is possible through changes in attitude and behavior. In Mexico, obesity is highly prevalent, but there is a paucity of evidence-based management programs.
- The ACTION-IO study aimed to identify perceptions, attitudes, and barriers to effective obesity care in people with obesity (PwO) and health care professionals (HCPs) in 11 countries using an online survey.

### What does this study add?

- The 2,000 PwO and 400 HCP respondents in Mexico often had diverging perceptions and behaviors, potentially representing barriers to optimal obesity care.
- PwO identified assuming sole responsibility for weight loss (45%) and a lack of financial means to support a weight-loss effort (34%) as barriers to discussing weight loss with HCPs. PwO (63%) felt motivated to lose weight, but the top barrier for HCPs discussing weight was the perception that PwO were not interested (76%) or motivated (69%) to lose weight.

<sup>1</sup> Obesity and Eating Disorder Clinic, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico. Correspondence: Verónica Vázquez-Velázquez (verovelazquez@yahoo.com) <sup>2</sup> School of Health Sciences, Marist University of Mérida, Mérida, Mexico <sup>3</sup> Novo Nordisk Mexico, Mexico City, Mexico <sup>4</sup> Endocrinology Division, University Hospital and Medical School, Autonomous University of Nuevo León, San Nicolás de los Garza, Mexico.

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improve through a variety of strategies (i.e., developing governmental policies and taxes on sugary drinks) (7,8), but prevention measures are still insufficient and unarticulated (9). Use of therapeutic tools, whether nonpharmacological options, approved adjuvant medications, or bariatric surgery, are limited or only partially implemented in relation to the official guidelines or standards (8). Public primary care clinics in Mexico generally do not employ dietitians or personnel trained in behavioral management strategies, and appointments for obesity management are infrequent and consist of general diet and exercise advice (9). The offering and coverage of multidisciplinary and comprehensive evidence-based programs for the detection, management, and follow-up of people with obesity (PwO) in Mexico is also partial and is limited to a few large hospitals (9). In general, obesity-management interventions are not currently covered by insurance in Mexico (10); there is a limited budget to perform bariatric surgery in public institutions, and private insurers do not offer coverage (11). For comparison, in the United States, Medicaid covers nutrition counseling in 21 states, pharmacotherapy in 16 states, and bariatric surgery in 49 states (12).

The difficulties related to the availability of and coverage for obesity management may reflect the segmented health care system in Mexico as a whole. Coverage for core health services in Mexico is the lowest among OECD countries, providing full coverage at 89.3% of the population (3). As of 2019, roughly half (52%) of health care in Mexico was financed by the government, whereas direct payments by households accounted for 41% of health spending (3). Excessive out-of-pocket health care payments are a known barrier to effective medical care, and although lower than the OECD average of 5.8%, in Mexico, 5.5% of households experienced catastrophic health care expenditures (3).

Although medical and scientific organizations define obesity as a disease (5,13), the medical care received by PwO is often suboptimal (14,15). Therefore, the strategies adopted to manage the epidemic have not fully incorporated treating obesity as a disease into the daily approach to the problem (9). Evidence-based results regarding the visions, attitudes, perceptions, behaviors, or barriers of PwO and health care professionals (HCPs) about obesity care are warranted to develop patient-centered weight-management programs.

The Awareness, Care, and Treatment in Obesity Management—International Observation (ACTION-IO) study aimed to identify the perceptions, attitudes, and behaviors of PwO and HCPs and the global barriers to obesity care. The primary analysis from the global data set has been previously reported (16). Here, we report the ACTION-IO results for PwO and HCPs in Mexico.

## Methods

The methodology for the ACTION-IO survey has been reported previously (16). The ACTION-IO study (ClinicalTrials.gov identifier NCT03584191) was a cross-sectional, noninterventional, descriptive study that collected data through an online survey among PwO and HCPs in 11 countries, including Mexico. The questionnaires were created by an international steering committee of obesity experts; questionnaire items were carefully phrased and presented in identical order for each respondent. Items in a list were displayed in alphabetical, categorical, chronological, or random order as relevant for each response. Mexican participants completed the survey in their native language between August 16, 2018, and October 15, 2018. The survey was conducted by a third-party vendor (KJT Group, Honeoye Falls, New York), which also managed the collection and analysis of the de-identified data.

### How might these results change the direction of research or the focus of clinical practice?

- ▶ This study in Mexico showed recognition of obesity as a complex disease by both PwO and HCPs and filled knowledge gaps in perceptions of obesity care.
- ▶ Transparency in contrasting perceptions and behaviors is necessary to establish better obesity care. In Mexico, both PwO and HCPs need to take on a more participatory role and collaborate to achieve successful weight management.

KJT Group conducted pretests of the survey with four PwO and four HCPs; the purpose was to evaluate the face validity of the survey, confirm that the questions were understood by respondents in each country, assess the cultural appropriateness of questions, and determine the accuracy of the translation. As a result of the pretests in Mexico, minor adjustments were made to the translations of questions in the surveys (eight for PwO; seven for HCPs).

All respondents provided electronic informed consent prior to initiation of the screening questions and survey. Respondents were recruited via online panel companies with permission to be contacted for research purposes where possible, with telephone and in-person recruitment also used for HCPs in Mexico. Respondents accessed the survey using a unique Web link; details regarding the digital fingerprinting system used to assess unique site visitors has been previously described (16). To prevent duplicate survey entries, unique site visitors were recorded via a user identifier (ID) that was passed along the unique Web link that respondents used to access the site. The system checked every respondent entering the survey against previous user IDs logged in its database. Respondents who began the survey and suspended progress were able to reenter the survey while it was still open and finish the survey where they left off. Respondents who had already received a terminal status (complete, over-quota, or terminate) were blocked from reentering the survey. Following closure of the survey, no users were able to gain access. The user ID and data of suspended respondents were stored until the survey was closed and were then eliminated from the data analysis.

With the aim of reducing sampling bias and achieving a more nationally representative sample, a stratified sampling approach was taken for PwO, whereby outbound samples were sent on the basis of pre-determined demographic targets for age, sex, and household income (where information was shared by the participant with consent). To ensure population representativeness, targets were monitored throughout data collection. Preceding participation, PwO were only informed of the purpose of the study and were blinded to the specific study goals. Samples of HCPs were monitored for specialist types but were not weighted. Additionally, to further represent demographic targets, the final PwO sample was then weighted.

Eligibility of respondents was determined using screening questions, and only those who were eligible completed the full survey. Eligible PwO in Mexico were  $\geq 18$  years old with a current BMI (based on self-reported height and weight) of  $\geq 30$  kg/m<sup>2</sup>. For the Mexican

population only, participants were eligible even if they declined to provide information concerning income as required by the local ethics committee. Exclusion criteria for PwO included pregnancy, participation in intense fitness or body-building programs, or experience of significant, unintentional weight loss in the past 6 months. Eligible HCPs were medical practitioners in Mexico, with  $\geq 2$  years of clinical practice, who spent  $\geq 70\%$  of their time in direct patient care and had seen  $\geq 100$  patients in the past month, of whom  $\geq 10$  needed weight management. HCPs specializing in general, plastic, or bariatric surgery were excluded.

The study was approved by the National Institute of Medical Sciences and Nutrition Salvador Zubirán (INCMNSZ, by its acronym in Spanish) ethics and investigation committees and complied with all Mexican laws and regulations regarding the management of personal information. The study was sponsored by Novo Nordisk and conducted in accordance with the Guidelines for Good Pharmacoepidemiology Practices (17) and the Declaration of Helsinki (18).

## Results

### Participants

A total of 174,714 PwO and 12,902 HCPs in Mexico were invited; 27,338 PwO (16%) and 1,036 HCPs (8%) responded, and 8,622 PwO (34%) and 577 HCPs (67%) qualified. A total of 2,000 PwO (90%) and 400 HCPs (99%) completed the survey (Table 1). The average completion time for PwO and HCPs was 33 and 38 minutes, respectively.

### Perceptions and attitudes toward obesity as a disease

Most PwO (71%) and HCPs (94%) agreed with the statement that obesity is a chronic disease and believed that obesity has a large impact on overall health (84% and 86%, respectively). Many PwO (86%) felt that weight loss was their own responsibility, and only 25% considered that their HCP had a responsibility to actively contribute to a successful weight-loss effort. Forty-one percent of HCPs placed complete responsibility for weight loss on PwO. Most PwO (76%) considered weight loss to be possible if they really set their mind to it. Eighty-two percent of HCPs stated that PwO would need to completely change their lifestyles to lose weight. Almost two-thirds of PwO (63%) said they were motivated to lose weight, and only 14% of PwO had no plans for weight loss within the next 6 months. Only 54% of HCPs thought that PwO were motivated to lose weight (Figure 1).

### Weight-loss attempts and outcomes

The majority of PwO (85%) stated that they had made at least one serious weight-loss effort in the past (Figure 2A). However, HCPs reported that only a mean of 42% of their patients with obesity had made a serious weight-loss effort (Figure 2B). Of patients who did make an effort, HCPs reported that only a mean of 38% were successful (Figure 2C). Few PwO (34%) had a self-reported weight loss of  $\geq 5\%$  of their body mass over the past 3 years, and of those, only 27% were able to maintain the weight loss for  $\geq 1$  year (9% of total PwO; Figure 2D).

### Weight-loss discussion and diagnosis

Many PwO (65%) had discussed their weight with an HCP in the past 5 years (Figure 3A), and among those who had, 72% had been diagnosed with obesity (47% of PwO in total). HCPs informed patients of their obesity diagnosis 89% of the time, and 2% of HCPs reported that they never inform their patients about a diagnosis of obesity. PwO struggled with their weight for a mean of 4 years before they first had a discussion with an HCP (Figure 3B). Seventy percent of PwO had not discussed a weight-management plan with an HCP in the past 6 months. Moreover, 42% of PwO who discussed weight with an HCP stated that they initiated the conversation themselves. HCPs reported discussing weight with 78% of their patients with obesity and stated that only 29% of their patients initiated the conversation. Half of PwO (50%) found discussions about weight management with their HCP very or extremely helpful, and 80% of PwO liked that their HCP brought up the conversation on weight with them (Figure 3C). The main reasons HCPs initiated a weight-management conversation were the patient's potential risk of developing new or additional obesity-related complications (73%), the presence of obesity-related comorbidities (73%), and/or their BMI (72%). Only 39% of PwO reported negative feelings after a weight-loss conversation, of whom only 3% reported feeling offended (Figure 3D).

### Barriers to weight-loss discussion

Both PwO and HCPs considered lack of exercise (80% and 89%, respectively) and unhealthy eating habits (69% PwO; 88% HCPs) as main barriers to weight loss, whereas less than half of PwO and HCPs considered genetic factors (39% of PwO; 38% of HCPs) to be a barrier. The top two reasons provided by PwO for not discussing weight management with an HCP were the belief that weight management was their own responsibility (45%) and a lack of the financial means to support a weight-loss effort (34%) (Figure 4). The top two reasons provided by HCPs for not discussing weight management with a patient were the perception that the patient was not interested (76%) and the perception that the patient was not motivated (69%) to lose weight.

### Attitudes toward treatment methods

General improvements in eating habits and increasing physical activity were perceived by most PwO (63% and 69%, respectively) and HCPs (79% and 71%, respectively) to be effective (Figure 5). However, PwO had almost double the percentage of HCPs (79% vs. 41%) for perceiving bariatric surgery as effective, followed by visiting a nutritionist (46%) or an obesity specialist (43%). After improvements in eating habits and physical activity, HCPs perceived the most effective methods to be visiting a nutritionist (61%), stress management (56%), and behavioral therapy or psychotherapy (49%). Both 41% of PwO and 43% of HCPs agreed that prescription weight-loss medication was more effective than other treatment options but disagreed about the effectiveness of over-the-counter weight-loss medication (32% vs. 11%, respectively).

Many PwO (77%) preferred to lose weight themselves without relying on medication, whereas only 37% of HCPs thought that patients with obesity would prefer to lose weight themselves without depending on medication. In addition, most PwO were concerned about side effects (78%) associated with prescription weight-loss medication, whereas most HCPs thought that their patients trusted them to recommend prescription weight-loss medications that are right for them (88%).

**TABLE 1** Sample demographics and characteristics of PwO and HCPs in Mexico

	PwO (n = 2,000)	HCPs (n = 400)
Mean age, y (range)	37 (18-87)	42 (26-76)
Gender		
Male	1,074 (54%)	242 (60%)
Female	923 (46%)	158 (40%)
Other	3 (<1%)	
BMI classification		(n = 361)
Underweight or healthy range (<25 kg/m <sup>2</sup> )	NA	191 (53%)
Overweight (25-29.9 kg/m <sup>2</sup> )	NA	135 (37%)
Obesity class I (30-34.9 kg/m <sup>2</sup> )	1,381 (69%)	24 (7%)
Obesity class II (35-39.9 kg/m <sup>2</sup> )	369 (18%)	2 (1%)
Obesity class III (≥40 kg/m <sup>2</sup> )	250 (13%)	9 (2%)
Number of comorbidities		
0	540 (27%)	
1	521 (26%)	
2	416 (22%)	
3	278 (15%)	
≥4	214 (10%)	
Residential area		
Rural or small town, population < 30,000	136 (7%)	
Small town, population 30,000-100,000	163 (8%)	
Suburb of a large city, population > 100,000	194 (10%)	
Urban area, population 100,000-500,000	478 (24%)	
Urban area, population 500,000-1 million	418 (21%)	
Major metropolitan area, population >1 million	611 (31%)	
Education		
Less than high school	16 (1%)	
High school	113 (6%)	
Normal basic	10 (1%)	
Preparatory school or baccalaureate	321 (16%)	
Technical or commercial studies after primary school	9 (<1%)	
Technical or commercial studies after high school	73 (4%)	
Technical or commercial studies after preparatory school	223 (11%)	
Bachelor's degree	1,017 (51%)	
Master's degree	199 (10%)	
Doctorate	19 (1%)	
HCP category <sup>a</sup>		
PCP		200 (50%)
Specialist		200 (50%)
Endocrinologist		83 (42%)
Cardiologist		42 (21%)
Obstetrician/gynecologist		42 (21%)
Internal medicine (non-PCP)		30 (15%)
Other		3 (1.5%)

**TABLE 1** (continued).

	PwO (n = 2,000)	HCPs (n = 400)
Obesity specialist <sup>b</sup>		
Yes		349 (87%)
No		51 (13%)

Data are number (%) and are reported for the final unweighted sample.

<sup>a</sup>Bariatric surgeons were ineligible per protocol-prespecified criteria.

<sup>b</sup>Physicians who see at least 50% of their patients for obesity/weight management, have advanced/formal training in obesity/weight management beyond medical school, report themselves as being experts in obesity/weight management, or work in an obesity service clinic.

HCP, health care professional; NA, not applicable; PCP, primary care physician; PwO, people with obesity.

However, both PwO and HCPs felt that cost was a major barrier for considering prescription weight-loss medication as a treatment option (60% vs. 63%, respectively).

### Scheduling of follow-up appointments

Follow-up appointments were scheduled for 51% of PwO who had discussed their weight with an HCP (33% of PwO in total; Figure 3A), and the majority (96%) reported attending or planning to attend the appointment. HCPs scheduled follow-up appointments with 63% of PwO and stated that 70% of patients always or mostly kept their follow-up appointments. Weight-management goals commonly selected by PwO were reducing the risks associated with excess weight/preventing a health condition (53%), improving their appearance (37%), and living longer (34%).

### Discussion

Given the growing impact of obesity on overall health in Mexico and globally, there was a need to identify misperceptions and potential barriers to optimal obesity management among PwO and HCPs (3). To our knowledge, this is the first study to investigate the perceptions and attitudes of PwO and HCPs and barriers to obesity care in the Mexican population.

The main barriers to obesity care facing PwO regarded acknowledgment of their own disease and maintenance of weight loss. The results showed that PwO recognized the disease as a problem, but 86% of PwO assumed that weight management was their own responsibility, and 70% of PwO had not discussed a weight-management plan with an HCP in the past 6 months. Thus, there is an inconsistency between PwO acknowledging obesity as a disease and handling their own obesity as a disease. Among PwO with >5% weight loss, 27% were able to maintain it for ≥1 year (only 9% of total PwO). Some possible explanations could be a lack of awareness of treatment options in addition to a paucity of structured support or strategies in the prevention of weight regain (19), and achieving and sustaining weight loss can be challenging in the long term because of the metabolic adaptation to weight loss (1,5).

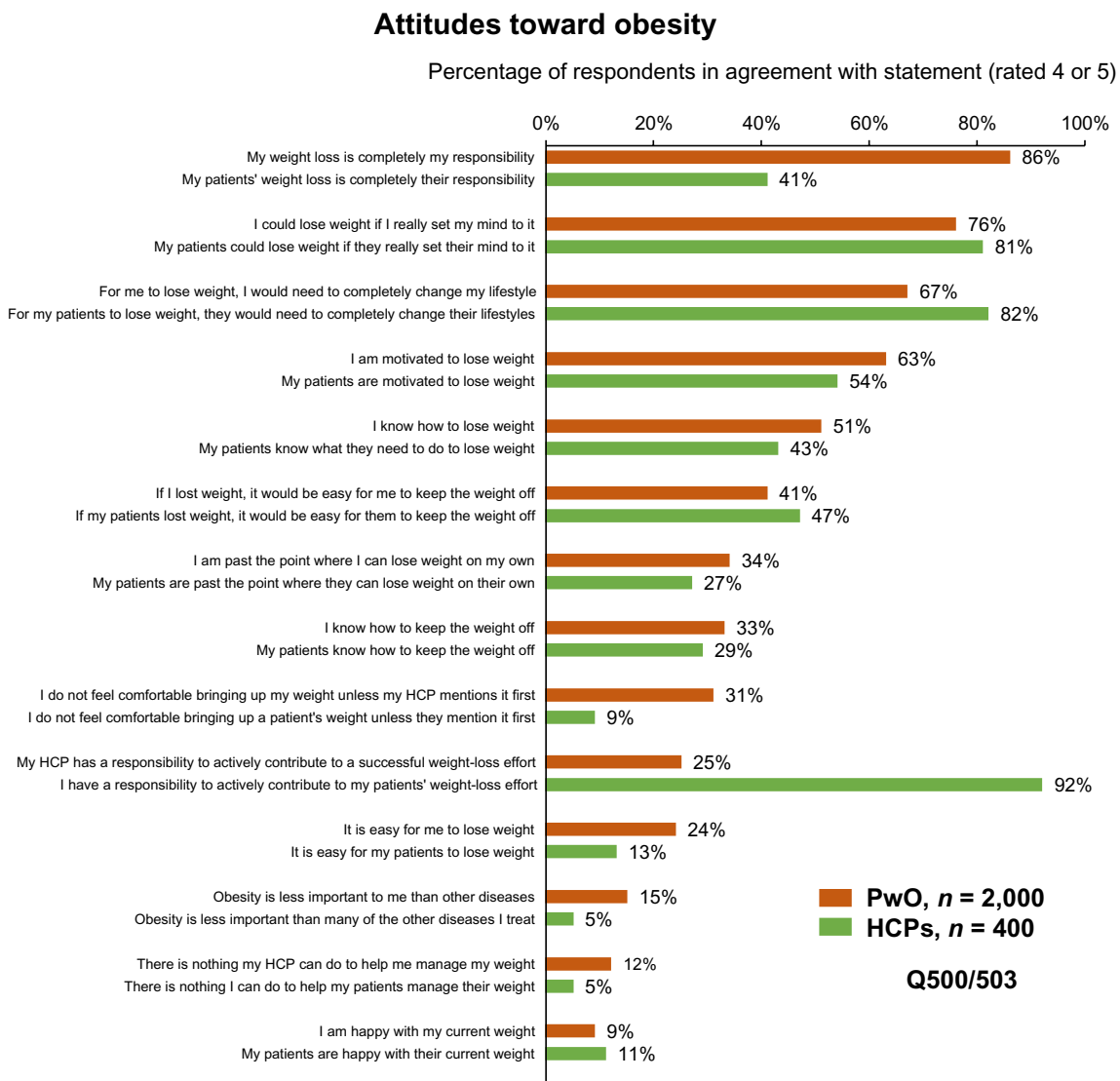
The main barriers to losing weight identified by Mexican HCPs were lack of exercise and unhealthy eating habits, which was consistent with the responses from Mexican PwO, as well as from the HCPs and PwO



globally (16). The top two barriers to Mexican HCPs discussing weight management were comparable with the global ACTION-IO cohort; HCPs thought that their patients were not interested in losing weight (76% vs. 71%, respectively (16)) or motivated to lose weight (69% vs. 68%, respectively). However, this was in contrast to how Mexican PwO felt, of whom 63% were motivated to lose weight. Similar results were reported for the ACTION-IO Italy (20), Spain (21), and South Korean cohorts (22), as well as for the ACTION Canada cohort (15). In the ACTION US study, only 21% of HCPs reported lack of patient motivation as a reason for not discussing weight management, although 71% thought it was a barrier for initiating weight loss (14). In contrast to the Mexican and global ACTION-IO results (16), HCPs in the ACTION US study reported lack of time as the main reason for not initiating a weight-management conversation (14). The difference in opinions between HCPs and PwO regarding motivation to lose weight may reflect real-life experience of HCPs or could represent an unintentional

negative bias (23). In Mexico, the barriers to HCPs discussing weight management with PwO could be a contributing factor to the underdiagnosis of obesity (9).

In the 2006 Mexican National Health and Nutrition Survey (NHNS), only 20% of PwO reported that they had been diagnosed with obesity (24). The ACTION-IO Mexico results were higher, at 47% of PwO, indicating that obesity is still underdiagnosed in Mexico. Several reasons could explain the difference in results, with time probably accounting for most of the difference. Approximately 12 years elapsed between the NHNS and our study; during that time, Mexico declared obesity an epidemiological emergency, and the government began implementing public health and policy measures to address the crisis (9,19). Additionally, increased public awareness of obesity and the recognition of obesity as a chronic disease by international organizations may have played a role (5,13,25,26), as a high proportion of PwO in



**Figure 1** Agreement of people with obesity (PwO) and health care professionals (HCPs) in Mexico with statements describing attitudes toward obesity. Agreement was rated on a scale of 1 (do not agree at all) to 5 (completely agree). Q, question.

our study reported initiating weight-management conversations with their HCPs, which may have led to a formal obesity diagnosis. Second, the study populations were different between NHNS and ACTION-IO Mexico, which makes direct comparisons difficult; a greater proportion of PwO were female in the NHNS (68% vs. 46%), fewer PwO lived in large urban or metropolitan areas in the NHNS (44% vs. 76%), and fewer had graduate degrees (7% vs. 62%) (24). It will be important for future studies to assess obesity diagnosis rates in Mexico at a wider population level to determine whether the increased rates of diagnosis reported here are seen throughout the country.

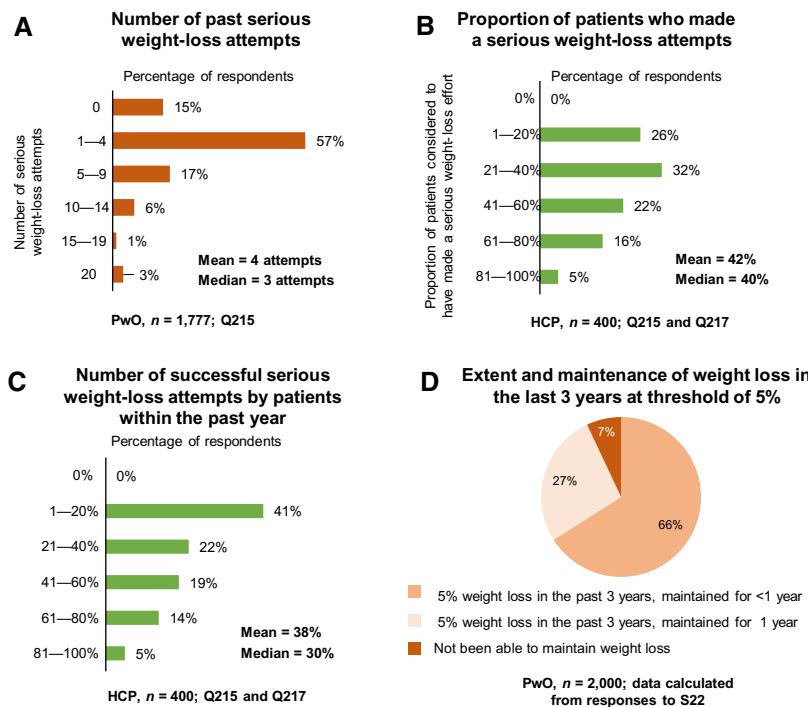
HCPs in our study reported that they informed their patients of their obesity diagnosis 89% of the time, which seems high considering the low rates of diagnoses reported by PwO; however, 87% of HCPs were obesity specialists. Although this is speculative, it is also possible that the actions of the HCPs in our study were impacted by their own weight biases because the majority reported having normal weight or underweight (53%). Studies in the United States have shown that HCPs' own perceptions and biases influence their medical practice. HCPs with normal weight are more likely to initiate weight conversations with PwO (27) and document obesity diagnoses (28) than HCPs with overweight or obesity; regardless of BMI classification, when the HCP's perception of the patient's weight exceeded that of the HCP's own weight, the HCP was more likely to initiate a discussion and record a diagnosis of obesity (27).

The majority of PwO and HCPs regarded general improvements in eating tendencies and physical activity as the most effective treatment

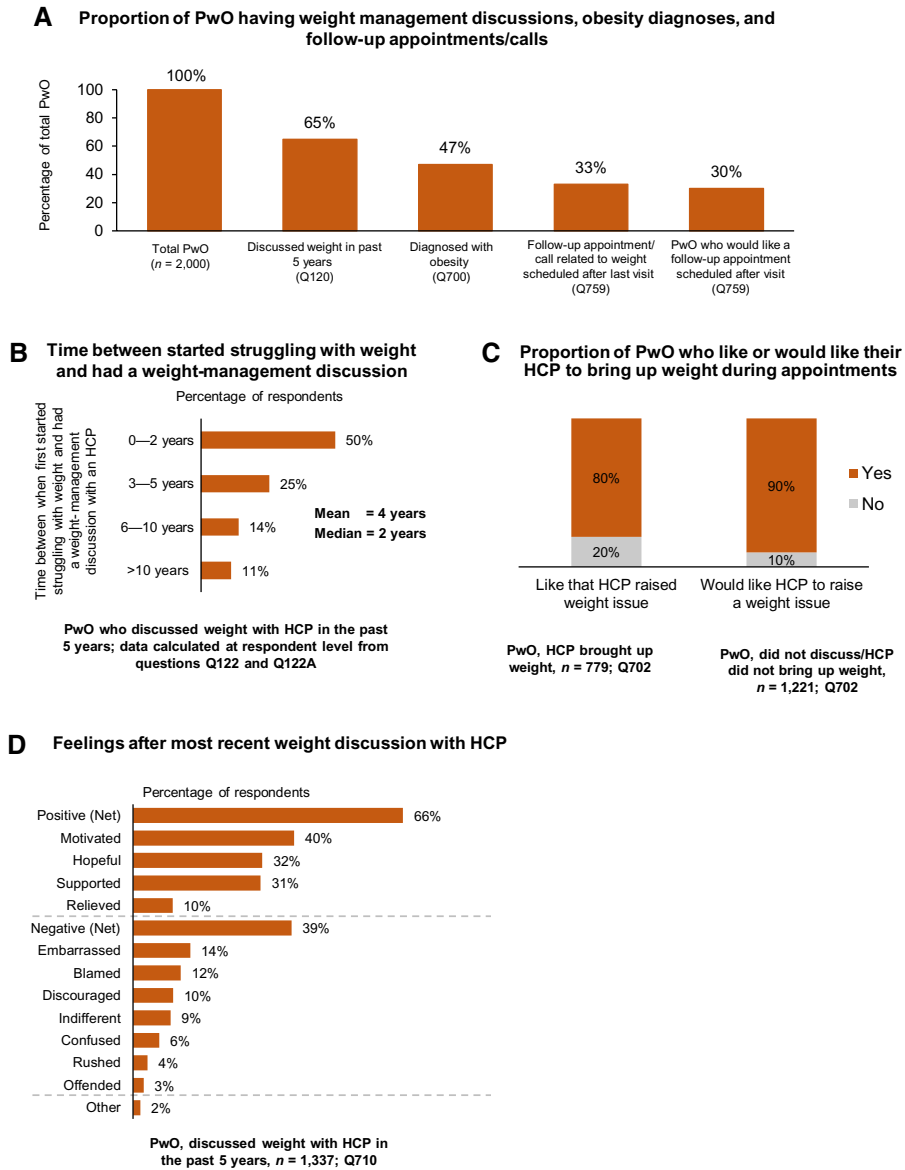
strategies for weight management. Fewer Mexican PwO (43%) stated that they considered prescription weight-loss medications to be more effective than other treatment options. PwO and HCPs had diverging opinions on treatment methods such as visiting a nutritionist, stress management, and behavioral therapy, bringing out the importance of communication between PwO and HCPs to achieve multidisciplinary treatment.

The majority of PwO (77%) preferred to lose weight themselves without depending on medication, but many Mexican HCPs (80%) thought that patients wanted to be offered prescription weight-loss medications to help with weight-loss efforts. However, cost to support weight-loss efforts was considered a major barrier by most Mexican PwO and HCPs (60% and 63%, respectively). It should also be noted that most PwO believe that it is their responsibility to manage their weight, and one-third of PwO mentioned the lack of financial means for a weight-loss effort as the most important barrier to seeking help from HCPs to manage their weight.

A common theme from the ACTION studies is that most PwO (≥80% for all except ACTION Canada [74%]) (14-16,20-22) assume that weight loss is completely their responsibility, which was also observed in Mexico. Similarly, few PwO recognize that their HCP has a responsibility to actively contribute to their weight-loss efforts (range, 21%-36%) (15,16,20-22). This is in stark contrast to the responses from HCPs; in Mexico, 92% of HCPs acknowledged their responsibility, compared with 76% to 83% of HCPs in the other ACTION-IO cohorts (16,20-22), 72% of HCPs in the ACTION US cohorts (14), and 78% of



**Figure 2** Weight-loss efforts and weight-loss response in Mexico. (A) Past serious weight-loss attempts by people with obesity (PwO); the percentage of patients considered by their health care professional (HCP) to have (B) made a serious attempt at weight loss and to have (C) been successful within the past year; and the (D) proportion of PwO who had 5% weight loss and maintenance of 5% weight loss in the past 3 years. S, screening question; Q, question.



**Figure 3** Weight-management discussions between people with obesity (PwO) and health care professionals (HCPs) and outcomes in Mexico. (A) Proportion of PwO who discussed weight management with an HCP, received an obesity diagnosis, and received a follow-up appointment/call. (B) Time between the start of weight issues and discussions with an HCP for PwO who had discussed their weight with an HCP in the past 5 years. (C) Proportion of PwO who preferred their HCP to raise a weight issue during appointments. (D) Emotional impact on PwO after a weight-management discussion with an HCP. Q, question.

HCPs in the ACTION Canada cohort (15). PwO assuming full responsibility for weight management is a form of weight-bias internalization, whereby PwO blame themselves; this is particularly concerning considering that weight stigma, including self-directed stigma, has been shown to be harmful to mental health and is associated with exercise avoidance and unhealthy eating (23).

Overall, these data highlight the need for further education on treating obesity as a disease, and not as a self-inflicted condition. These results also emphasized the necessity of recognizing available and effective evidence-based treatment options besides modifying behavior related

to diet and exercise. Nevertheless, the paucity of available pharmacological resources in the Mexican market should be noted, as should the fact that only 8% of PwO had received treatment by a health care provider (9). In Mexico, there is a substantial number of adults looking to lose weight with strategies that have limited or no scientific evidence, such as by using dietary supplements and herbal products (4).

More Mexican HCPs (41%) than HCPs globally (23%; ACTION-IO study steering committee, personal communication) addressed and treated patients primarily for obesity. Based on the large number of patients the Mexican HCPs see primarily for obesity, it may provide

### Reasons for not discussing weight

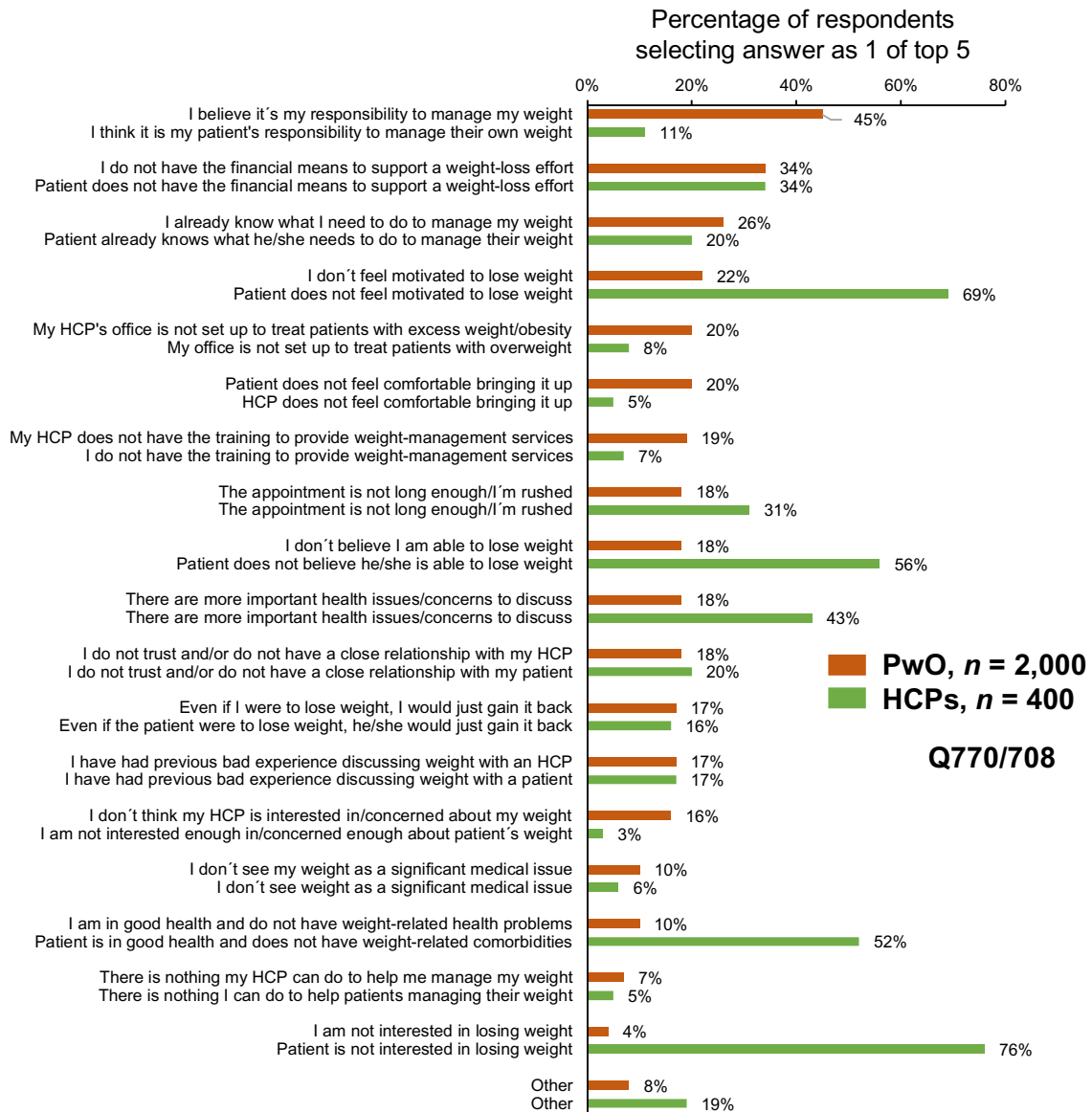


Figure 4 Reasons for not holding discussions around weight with a health care professional (HCP) or patient for people with obesity (PwO) and HCPs in Mexico. Q, question.

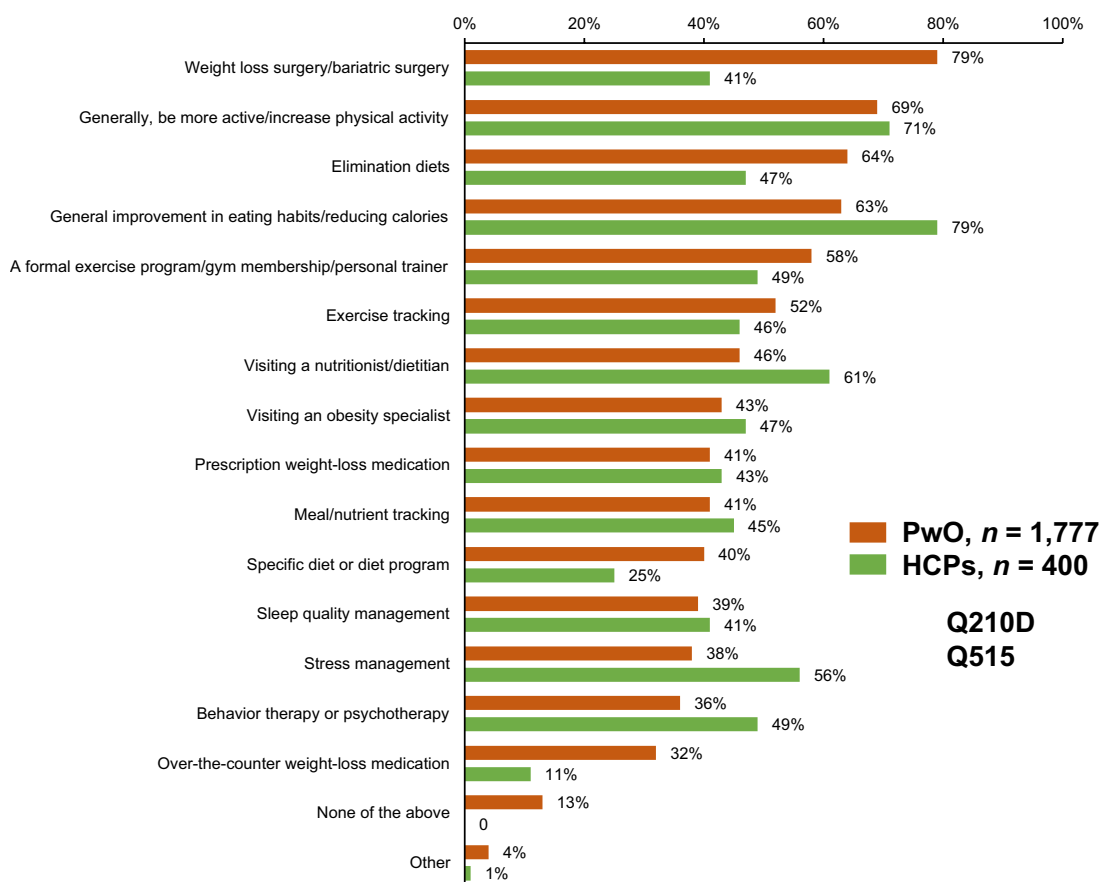
motivation to evaluate and adapt obesity-related policies and management strategies (19). Mexican PwO struggled for a mean of 4 years before their first discussion of weight issues with an HCP, increasing the possibility of complications arising. A contributing factor could be that PwO assumed full responsibility, thus highlighting opportunities to adopt new strategies for improved communication between HCPs and PwO. The results from the study also supported the need for improved education concerning the biological basis and clinical management of obesity in Mexico (29), as current approaches can often appear to be outdated and may not contain evidence-based recommendations (19).

The main goals of Mexican PwO for weight management versus the global cohort were to reduce the risks associated with excess weight and/or prevent a health condition (53% vs. 46%, respectively; ACTION-IO study steering committee, personal communication), to improve physical appearance (37% vs. 33%, respectively; ACTION-IO study steering committee, personal communication), and to live longer (34% vs. 24%, respectively). These goals may be more important in our population than they are globally and could be a factor to consider in discussions of weight and goal-setting between Mexican PwO and HCPs, in addition the other dimensions of obesity due to its multifactorial origins (e.g., genetic, physiological, environmental, and socioeconomic) (1,2).



## Methods that PwO and HCPs found effective for weight management

Percentage of respondents in agreement with statement (rated 4 or 5)



**Figure 5** Weight-management methods deemed effective by people with obesity (PwO) and health care professionals (HCPs) in Mexico. For PwO, responses were only taken from those who had tried each method. Q, question.

The strengths of the study included the scientific rigor; the careful design of the questionnaires, including ways to avoid bias; and the large sample size (2,000 PwO and 400 HCPs), making these results a robust scientific resource. Identification of divergences in the perceptions of PwO and HCPs filled a knowledge gap regarding obesity care in Mexico and has provided an opportunity to address these issues.

Limitations of the study included the exploratory and descriptive design. Recruitment by phone or electronically could have introduced a bias in the selection of the population that responded. Response rates to the survey were low (15.6% for PwO and 8.0% for HCPs), which may impede its external validity and call its representativeness into question, but response rates were similar to those of the global survey (19.9% for PwO and 16.7% for HCPs; ACTION-IO study steering committee, personal communication) (16). Weight and height were self-reported, and, as many were likely to have had a diagnosis of obesity, that may have been an incentive to overestimate height and underestimate weight, skewing the BMI calculations to be lower than if the precise measurements were used. Finally, the population of PwO and HCPs who participated may have shown a greater interest in the approach to

obesity care than those who did not participate, which may have led to overrepresentation.

## Conclusion

In summary, obesity is well recognized as a complex disease (1). These results of our study identified that the perceptions and behaviors of Mexican PwO and HCPs can often be confusing and contradictory and they may represent barriers that restrict access to effective obesity care. In Mexico, because prevention and treatment strategies for obesity are still being defined, these results will promote collaborative conversations about the disease among the Mexican population and they may help to shape future approaches for effective obesity care. **O**

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