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How Filipinos View Obesity: Findings From the ACTION APAC Study

Nemencio Nicodemus Jr.,[1] Edgardo Juan Tolentino,[2] Cecilia Jimeno,[3] Joy Arabelle Fontanilla,[4] Cyrus Pasamba,[5] Danieson Lampano[5]

[1]*Department of Biochemistry and Molecular Biology, College of Medicine, University of the Philippines, Manila, Philippines*
[2]*Makati Medical Center, Makati City, Philippines*
[3]*Department of Pharmacology, College of Medicine, University of the Philippines, Manila, Philippines*
[4]*Center for Weight Intervention and Nutrition Services, St. Luke's Medical Center Global City, Philippines*
[5]*Novo Nordisk Pharmaceuticals Philippines Inc.*

Abstract

Objectives. This sub-analysis of the ACTION APAC study aimed to identify perceptions, attitudes and behaviors related to obesity and its management among people with obesity (PwO) and healthcare providers (HCPs) in the Philippines, identifying barriers to effective care and contributing to management strategies.

Methodology. ACTION APAC was a cross-sectional, non-interventional, descriptive survey conducted from April 14 to May 23, 2022 across nine countries, involving 1,000 PwO and 201 HCPs.

Results. Most participants agreed that obesity is an illness but 91% of PwO felt losing weight was entirely their responsibility. Both groups identified similar motivators and barriers to weight loss. Weight stigma significantly impacted PwO but fewer than half discussed weight with their HCPs. Many PwO were happy with their weight and did not consider themselves as having obesity. Lifestyle modifications were preferred for weight management by both groups, while HCPs were reluctant to prescribe pharmacotherapy or recommend bariatric surgery due to lack of knowledge and cost, respectively.

Conclusion. The study revealed a discrepancy between recognizing obesity as an illness and attitudes towards its treatment, highlighting a need for better education and tailored management strategies that consider cultural factors in the Philippines.

Key words: obesity, chronic disease, socioeconomic factors, weight stigma, Philippines

INTRODUCTION

Obesity is a chronic disease characterized by excessive fat accumulation.[1] Since 1990, global adult obesity rates have more than doubled, while adolescent obesity has quadrupled.[1] This increase in the prevalence of obesity has been exacerbated by the coronavirus disease 2019 (COVID-19) pandemic due to the substantial reduction in physical activity, along with the tendency to overeat resulting from the sudden shift to a work-from-home setup.[2] Obesity is a leading risk factor for multiple comorbidities, including heart disease, stroke and diabetes, underscoring the urgent need to address this global obesity crisis.[1]

In the Philippines, the prevalence of overweight and obesity increased from 20.2% in 1998 to 37.2% in 2018.[3] One study reported a sevenfold increase in the prevalence of obesity in women from Metro Cebu between 1983 and 2005.[4] Childhood obesity rates are also increasing in the Philippines, with a survey showing a rise in obesity from 8.6% in 2015 to 11.7% in 2018.[3]

This trend is correlated with an increase in socioeconomic status, urbanization and other factors.[4] The Philippines has been described as an obesogenic environment,[5] partly due to its cultural background. For example, one study found a positive association between overweight/obesity and the frequency of observing merienda (a light meal taken between breakfast and lunch or lunch and dinner).[6] Another study found that Filipina women in the Philippines had a higher prevalence of obesity than Filipina women in Korea, indicating the effect of the environment. However, the same study found that Filipina women in Korea had a higher prevalence of obesity than Korean women in Korea[7] indicating that genetics are also involved. Lifestyle also has a role to play and Filipina women overburdened with work and childcare had the highest body mass index (BMI) values.[8]

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Corresponding author: Nemencio A. Nicodemus Jr., MD, FPCP, FPCEDM, FACP
Professor, University of the Philippines-College of Medicine,
Department of Biochemistry and Molecular Biology
547 Pedro Gil St., Ermita, Manila, 1000 Metro Manila, Philippines
Tel. No.: (+632) 558-0888
E-mail: nemie.nicodemus@gmail.com
ORCiD: https://orcid.org/0000-0003-0927-3497

It is well reported that Asians are particularly susceptible to insulin resistance and cardiovascular risk at lower body weights[9–11] and according to 2021 data, heart disease, stroke and diabetes are among the top conditions responsible for death and disability in the Philippines.[12] In Filipino patients with COVID, obesity was significantly correlated with higher in-hospital mortality and increased need for intensive care unit admission.[13] These figures illustrate the severe impact of obesity-related illnesses on the nation's health and underscore the need for effective obesity care and intervention strategies.

The obesity crisis in the Philippines has not gone unnoticed and several initiatives aimed at curbing obesity are underway. These include:

- Executive Order No. 51 or the "Philippine Milk Code" (1986): this regulated the marketing of breast milk substitutes.[14,15]
- The Department of Education's Order No. 13, "Policy and Guidelines on Healthy Food and Beverage Choices in Schools" (2017): some local government units have enacted ordinances prohibiting the sale and promotion of unhealthy food and beverages to students inside and near public and private school premises.[5]
- The Overweight and Obesity Prevention and Management Program: part of the Philippine Plan of Action for Nutrition (2017–2022), this government-led initiative addresses obesity prevention and management.[15,16]
- The Republic Act 10963 "Tax Reform for Acceleration and Inclusion (TRAIN) Law" (2018): a tax on sweetened beverages depending on the sugar content.[5,15]
- Philippine Association for the Study of Overweight and Obesity (PASOO): a non-profit organization, PASOO promotes healthy weight management through continuing medical education, public health campaigns, recommendations, and the Exercise is Medicine campaign.[17]

However, these measures have had limited success, and obesity continues to rise,[2] proving that the problem of obesity in the Philippines is complex and the underlying psychosocial factors influencing individuals with obesity and their carers require further investigation. Understanding these factors is essential for developing tailored and effective obesity management strategies.

Effective obesity care relies heavily on the interactions between HCPs and PwO. A cooperative, respectful relationship between HCPs and PwO is crucial for providing optimal care and supporting individuals in achieving and maintaining a healthy weight.[18,19]

The ACTION APAC (Awareness, Care and Treatment in Obesity Asia-Pacific Region) study was conducted to gain further insight into the dynamics of effective obesity care. This study aimed to identify perceptions, attitudes and behaviors related to obesity and its management among both PwO and HCPs. It also sought to uncover potential barriers to effective obesity care in the Asia-Pacific (APAC) region.

Although the primary results from the regional ACTION APAC dataset have been previously reported,[20] this paper presents the findings from the ACTION APAC survey specifically focused on the Philippines. This local perspective aims to provide deeper insights into the challenges and opportunities for improving obesity management in the Philippines.

OBJECTIVES

The primary objective of ACTION APAC was to identify perceptions, attitudes, behaviors and potential barriers to effective obesity care across PwO and HCPs in the APAC region.

The secondary study objectives were to generate insights to guide collaborative action to improve care, education and support for PwO and to create a communication platform to help change how patients and HCPs manage, treat and support obesity.

METHODOLOGY

Study design

The ACTION APAC study was a cross-sectional, non-interventional, descriptive study that collected data from an anonymous, online survey conducted between April 14, 2022 and May 23, 2022. Nine countries in the APAC region were included: Bangladesh, India, Indonesia, Malaysia, Pakistan, Philippines, Singapore, Thailand and Vietnam. The survey was conducted by a healthcare consultancy firm (KJT Group, Inc., Rochester, New York, United States) through existing online databases/panels. The study received an exemption from the Western Institutional Review Board Copernicus Group (WCG International Review Board – Washington, USA), as it contained adequate protections for the privacy of subjects and maintained confidentiality of data. The full methodology for the ACTION APAC survey has been reported previously.[21]

Study cohorts

Separate surveys were completed by PwO and HCPs. All participants provided informed consent.

PwO were eligible for inclusion if they lived in the Philippines, were aged ≥18 years, and had a current BMI of ≥25 kg/m^2 based on self-reported height and weight. PwO were excluded if they were pregnant, had previously participated in the survey, were actively participating in intense fitness programs (defined as more than 150 minutes of mild-to-moderate intensity exercise per week), or had experienced significant, unintentional weight loss in the past 6 months. PwO who were currently receiving weight loss medications were also eligible for inclusion.

HCPs were eligible for inclusion if they were a medical practitioner in the Philippines, aged ≥18 years, had been on practice for ≥2 years, had seen ≥100 patients (including ≥10 PwO) in the past month, and spend at least half of their professional time in direct patient care. HCPs with previous study participation or language barriers precluding adequate understanding or cooperation with the study were excluded.

Sample sizes were selected to balance statistical power, recruitment feasibility and cost. PwO sample sizes for the Philippines were targeted to achieve a 2–3% margin of error around a proportion estimate of 50%, with the margin of error calculated from a standard normal (Z-) distribution with z=1.96, or approximately a 95% level of confidence.

Survey design

Survey questions were based on three previous ACTION studies (United States,[22] Canada,[23] and International Observation [IO][24]) and adjusted for the APAC region using feedback from a panel of local scientific experts.

Different questionnaires were developed for PwO (Supplement A) and HCPs (Supplement B) and were available in both English and Tagalog.

In both the PwO version and the HCP version of the survey, topics addressed included perceptions, behaviors and awareness related to obesity and obesity management. Questions were also included on the stigma associated with being overweight, as this is an important topic with implications for healthcare.

Responses were quantified using single- and multiple-item selections reported as frequencies and percentages. A five-point Likert scale was used to measure certain attitudes or opinions. A commonly used scale within the study was agreement, measured from 1 "strongly disagree" to 5 "strongly agree".

Ethical approval

The WCG Institutional Review Board prospectively reviewed and approved the study. The study and data accumulation conformed to Philippine laws and local guidelines, informed consent was obtained from participants and the study was in adherence to the tenets of the Declaration of Helsinki.

Data collection

Pre-test interviews lasting 60 minutes were conducted with six PwO and six HCPs (three each of primary care physicians and specialists) in Indonesia, India, Pakistan, Thailand and Singapore, to assess face validity prior to launch of the quantitative surveys. Participants took the survey online while speaking with an in-country moderator by telephone or in person.

The PwO and HCP surveys were reviewed by the WCG International Review Board and approved per local regulations.

Data were collected in the survey with Decipher Survey Software (Focus Vision Worldwide Inc., Stamford, Connecticut, United States), which was administered via online panels, telephone and in person.

The study was conducted under the Declaration of Helsinki and the European General Data Protection Regulation. All data were stored on secure servers and transferred anonymously (without participants' personal information) to Novo Nordisk in an encrypted Study Data Tabulation Mode format at the end of the study. Participants completing the survey received modest compensation for their participation.

Data analysis

Analysis of de-identified data was conducted by KJT Group using various statistical software packages, including IBM SPSS Statistics for Windows, version 23.0 (IBM Corp., Armonk, New York, United States), STATA/IC, version 14.2 (Stata Corp LLC, College Station, Texas, United States) and Excel, version 365 (Microsoft Corporation, 2024). Descriptive statistics (means, frequencies) were calculated using Q Research Software, version 5.14.2.0 (Displayr Pty, Ltd., New South Wales, Australia). Categorical data are presented as counts and percentages.

To minimize selection bias, PwO data were weighted to representative demographic targets within each country for age, gender, household income, education and region based on data from the 2011 International Standard Classification of Education, the International Data Base and other public data. Weights were calculated using a raking technique to achieve the nearest possible sample and target balance, with individual respondent's weights capped at 0.5 and 5.00 to avoid extreme design effects.

Outliers were identified as falling outside 1.5 × the interquartile range and extreme outliers were identified as those outside 3 × the interquartile range. Extreme outliers were removed subjectively from mean calculations throughout the report based on data distribution implications on reported findings.

RESULTS

Demographics

A total of 1,000 PwO and 201 HCPs completed the survey. Of the PwO, 53% were female and 47% were male. The mean age was 37.2 years and the majority (59%) had Class I obesity (BMI: 25–29.9 kg/m^2), 27% had Class II obesity (BMI: 30–34.9 kg/m^2), 8% had Class III obesity (BMI: 35–39.9 kg/m^2), and 6% had Class IV obesity (BMI: ≥40 kg/m^2).

Most of the HCPs were male (87%) and had an average of 9.8 years in practice. Nearly three-quarters of the HCPs (71%) were obesity specialists (i.e. ≥50% of patients seen primarily for obesity), 90% considered themselves as experts in obesity, and 91% had received advanced training in obesity. See Tables 1 and 2 for the characteristics of the study sample.

Perceptions of obesity, weight loss motivations, and barriers

It was agreed by 65% of PwO and 88% of HCPs that obesity is a chronic disease.

Table 1. Key demographics and characteristics of the study population (PwO)

	PwO (n=1,000)
Age, years, mean	37.2
Male (%)	47
Female (%)	53
Obesity class [a]***, (%)***	
Class 1 (BMI 25–29.9 kg/m^2)	59
Class 2 (BMI 30–34.9 kg/m^2)	27
Class 3 (BMI 35–39.9 kg/m^2)	8
Class 4 (BMI ≥40 kg/m^2)	6
Setting, (%)	
Urban area	56
Suburban area close to a city	30
Rural area	14
Comorbidities, (%) [b]	
High blood pressure	27
High cholesterol	15
Eating disorder	11
Depression/anxiety	13
Type 2 diabetes	10
Cardiovascular disease	9
None listed	41
Education, (%) [c]	
No education	1
Primary	5
Secondary	22
Undergraduate	22
Graduate	51

[a] Obesity class definitions differ between countries.
[b] Percentages do not add to 100 because respondents could select multiple responses.
[c] Due to rounding, the percentages stated do not add up to 100% exactly.
BMI, body mass index; PwO, people with obesity

Table 2. Key demographics and characteristics of the study population (HCPs)

HCP practice category, (%)	HCPs (n=201)
Received advanced training in obesity	91
Provides care for obesity as primary treatment objective	93
Time providing obesity care to patients, (mean years)	7.1
Part of interdisciplinary obesity treatment team	93
Considered self an obesity expert, (%)	90
Obesity specialist, (%) [a]	71

[a] An obesity specialist is defined as a physician who reported seeing ≥50% of patients specifically for obesity/weight management.
HCP, healthcare provider

The majority of PwO (91%) believed that they were responsible for their weight loss, but 80% considered that their HCP had a responsibility to support their efforts (Figure 1a).

For PwO, top goals for weight loss were to prevent a health condition and/or to reduce the risks associated with excess weight (40%), to live a longer life (31%) and to feel more confident/less judged by others (27%). In terms of motivation, PwO wanted to feel better physically and to have more energy (44%), to be more confident (36%) and more fit (36%). HCPs were broadly aligned; they believed that wanting to feel better physically (37%), general health concerns (23%) and wanting to be more confident (26%) were the top motivators for PwO to lose weight. The top 10 weight-loss motivators according to PwO and HCPs are shown in Figure 2. Both PwO and HCPs agreed that a lack of exercise (91% and 90%, respectively), preference for unhealthy food (88% and 93%, respectively) and metabolism (91% and 94%, respectively) were among the top barriers for PwO to lose weight. The top 10 barriers to weight loss according to PwO and HCPs are shown in Figure 3.

Perceptions of current weight, weight-loss attempts, and outcomes

Most participants were aware that they carried excess weight, yet 3 out of 5 (61%) believed that they were of normal weight or overweight rather than obese.

Some PwO (39%) believed that their life was controlled by their weight and more than half (58%) believed that, despite their best efforts to diet, they would revert to previous eating habits. Almost half (47%) felt that fate and/or other factors beyond their control had an impact on their weight.

At the time of the survey, the cohort of PwO had made an average of three serious attempts at weight loss, while 27% of PwO reported making no weight loss attempt. On average, PwO set a goal to lose 22% of their current weight. Of those who lost weight, 68% reported weight regain after successfully maintaining weight loss for 6 months or more. HCPs believed that just over half (56%) of the PwO under their care had made a serious weight loss effort and that only 52% of those were successful. PwO cited not following their eating plan (48%), discontinuing exercise (42%) and difficulty maintaining the changes they had made (35%) as the most common reasons for weight regain (Figure S1).

Perceptions of weight stigma

PwO and HCPs believed that having obesity made it harder for PwO to form a romantic relationship (63% and 37%, respectively), get a job (57% and 32%) and be successful in the workplace (50% and 33%). Obesity was viewed as having a somewhat or very negative impact on others' perception in terms of being athletic (61% and 24%, respectively), healthy (62% and 25%) and/or how much willpower a person has (52% and 18%).

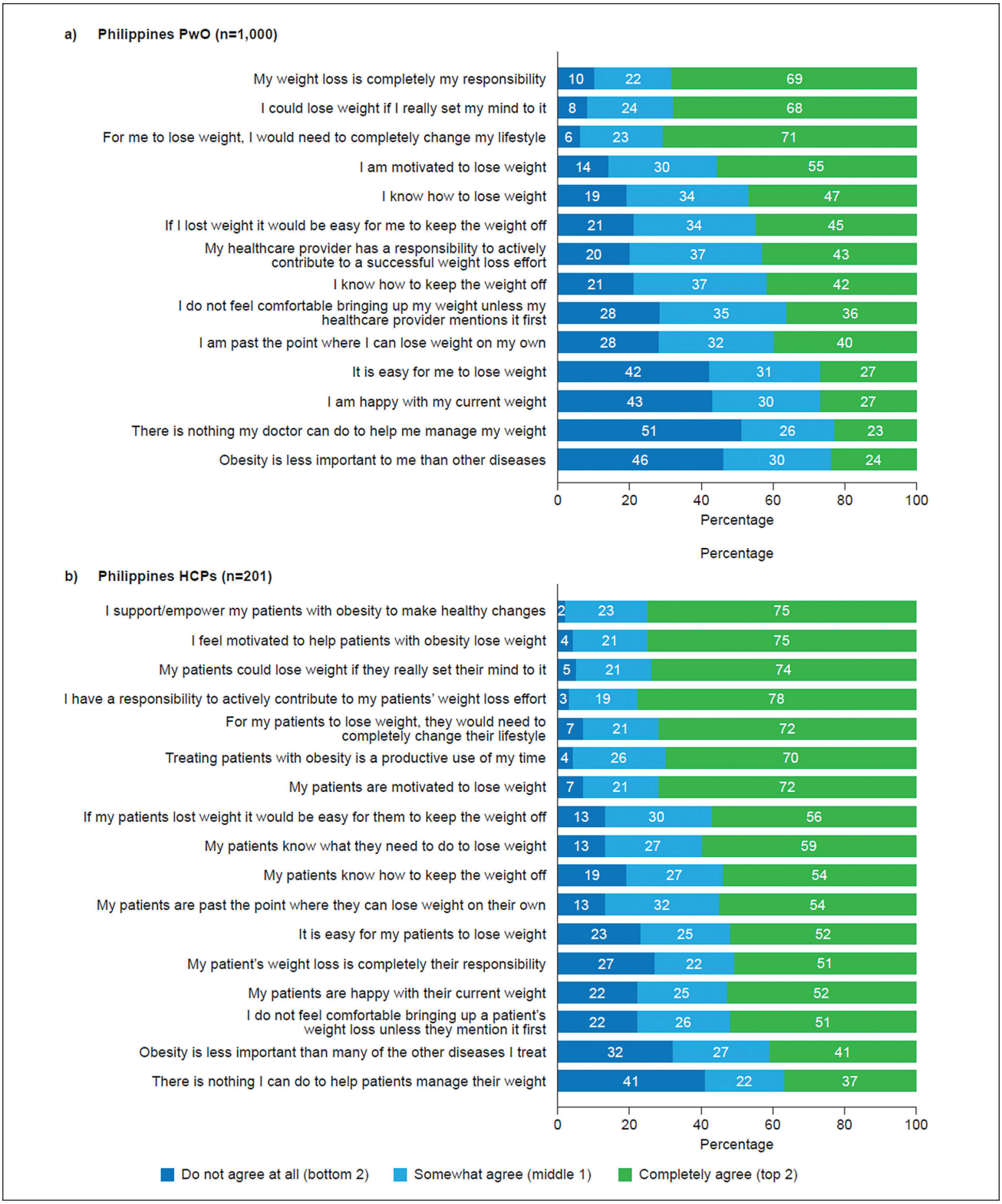

Figure 1. PwO and HCPs' attitudes toward obesity and weight management.

[a] Based on the question to PwO, "Please indicate how much you agree with each of the following…".

[b] Based on the question to HCPs, "Thinking of your patients with obesity as a whole, please indicate how much you agree with each of the following…"

Due to rounding, the total of the three categories within each entry may not add up to exactly 100% when calculated based on the whole numbers shown.

Interactions between PwO and HCPs

Fewer than half of PwO (44%) reported discussing weight with their HCPs in the past 5 years, with only one-third having spoken with an HCP regarding weight loss in the past 6 months. On average PwO spent 2 years struggling with their weight before discussing it with an HCP. HCPs acknowledged discussing weight with slightly more than half (58%) of their patients with obesity. Barriers to dialogue are shown in Figure 4.

The dialogue was initiated by PwO just under half the time (46%, self-reported), complementing the HCPs' belief that they initiated the conversation just over half the time (59%). PwO generally liked it when HCPs initiated the dialogue (63%) or, where this did not happen, they would have liked their HCP to do so (69%). Most PwO (74%) felt positive after a discussion.

The main reason cited by PwO for not discussing weight with HCPs was a lack of financial means to support their weight-loss efforts (41%) (Figure 4a). HCPs were likely to initiate a conversation about weight if their patients had a high BMI (36%), if they had obesity-related comorbidities (46%), or if they were at risk of developing new/additional obesity-related disease (48%). Most (86%) were very comfortable or extremely comfortable discussing weight with their patients. However, about a third of HCPs perceived their patients having a lack of interest (32%) and not feeling motivated (29%) as two of the top reasons for which they would not initiate a weight-loss discussion with patients (Figure 4b).

Most HCPs (84%) reported that they recorded the obesity diagnosis in their patients' charts most or all the time, but only informed 56% of PwO of their diagnosis and scheduled a follow-up appointment in 56% of cases. The majority of PwO who discussed weight in the previous 5 years

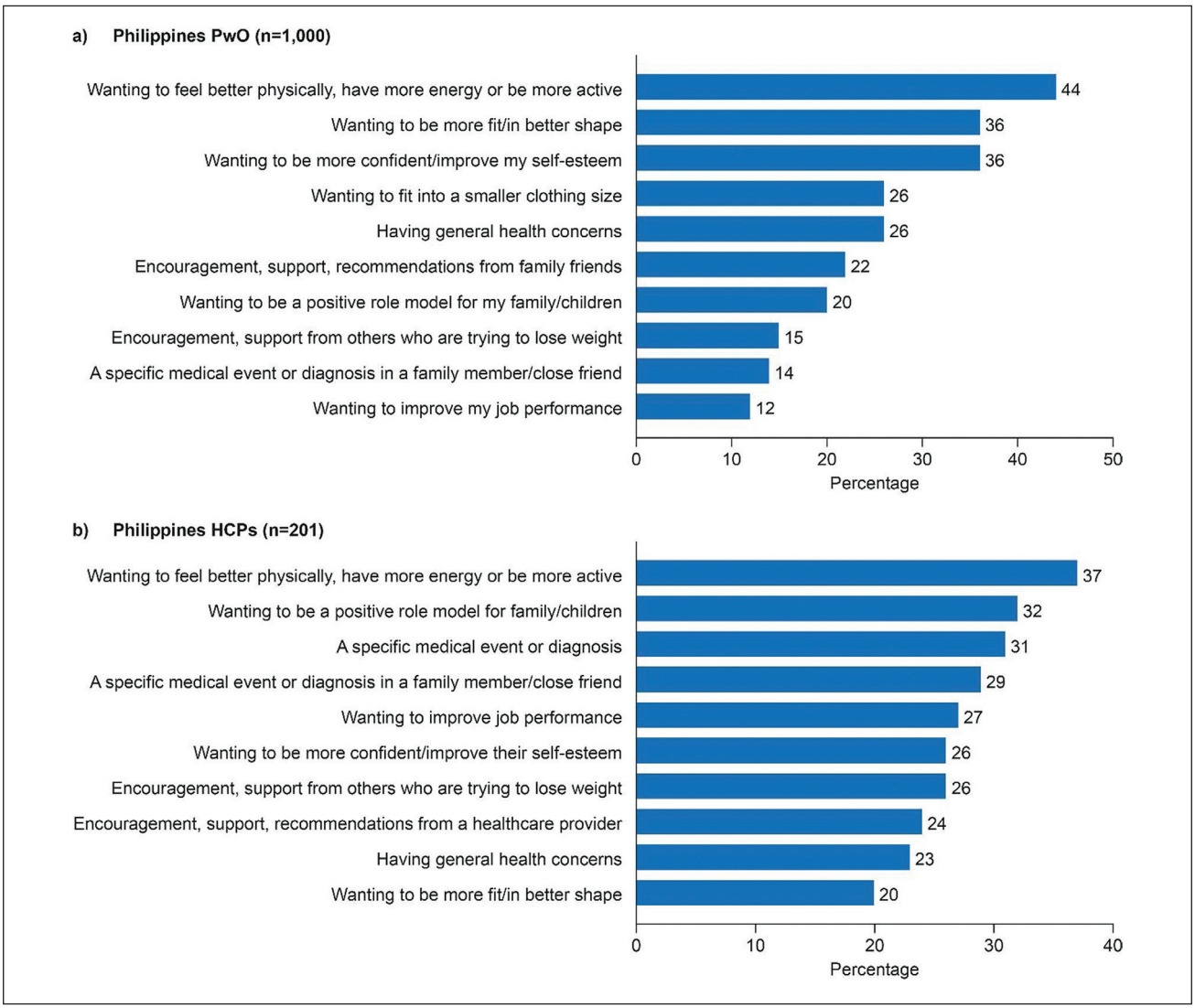

Figure 2. Top 10 motivators for weight loss in PwO.

[a] Based on the question to PwO, "Which of the following, if any, have motivated you the most to lose weight?".

[b] Based on the question to HCPs, "In your experience, which of the following motivates people to lose weight?"

talked to an obesity specialist (63%), with slightly fewer engaging in discussion with a dietitian (42%) or primary care physician (46%).

Attitudes and perceptions of obesity management behaviors PwO reported using the internet, including social media (55%) and smartphone applications (40%) and HCPs (33%) for resources for obesity management.

The most common method recommended for obesity management by HCPs was an electronic app featuring weight loss tracking, healthy eating guidance and physical activity suggestions (30%). Most PwO (70%) preferred to lose weight without medications, despite 53% believing that good weight loss medications are available.

Over half of HCPs (53%) reported not being comfortable with prescribing weight loss medications due to a lack of knowledge. Notably, nearly 40% of HCPs did not believe weight loss medications were useful and expressed concerns about adverse effects (73%) and long-term safety (71%).

Both PwO (80%) and HCPs (71%) would rather use lifestyle changes than undergo or recommend bariatric surgery for weight loss, with most HCPs reporting bariatric surgery to be the last resort for weight loss (68%). Most HCPs believed that there were good surgical options available for weight loss (75%) but felt that cost is a major barrier (61%). HCPs' recommended methods for weight loss and strategies for management are shown in Figure 5.

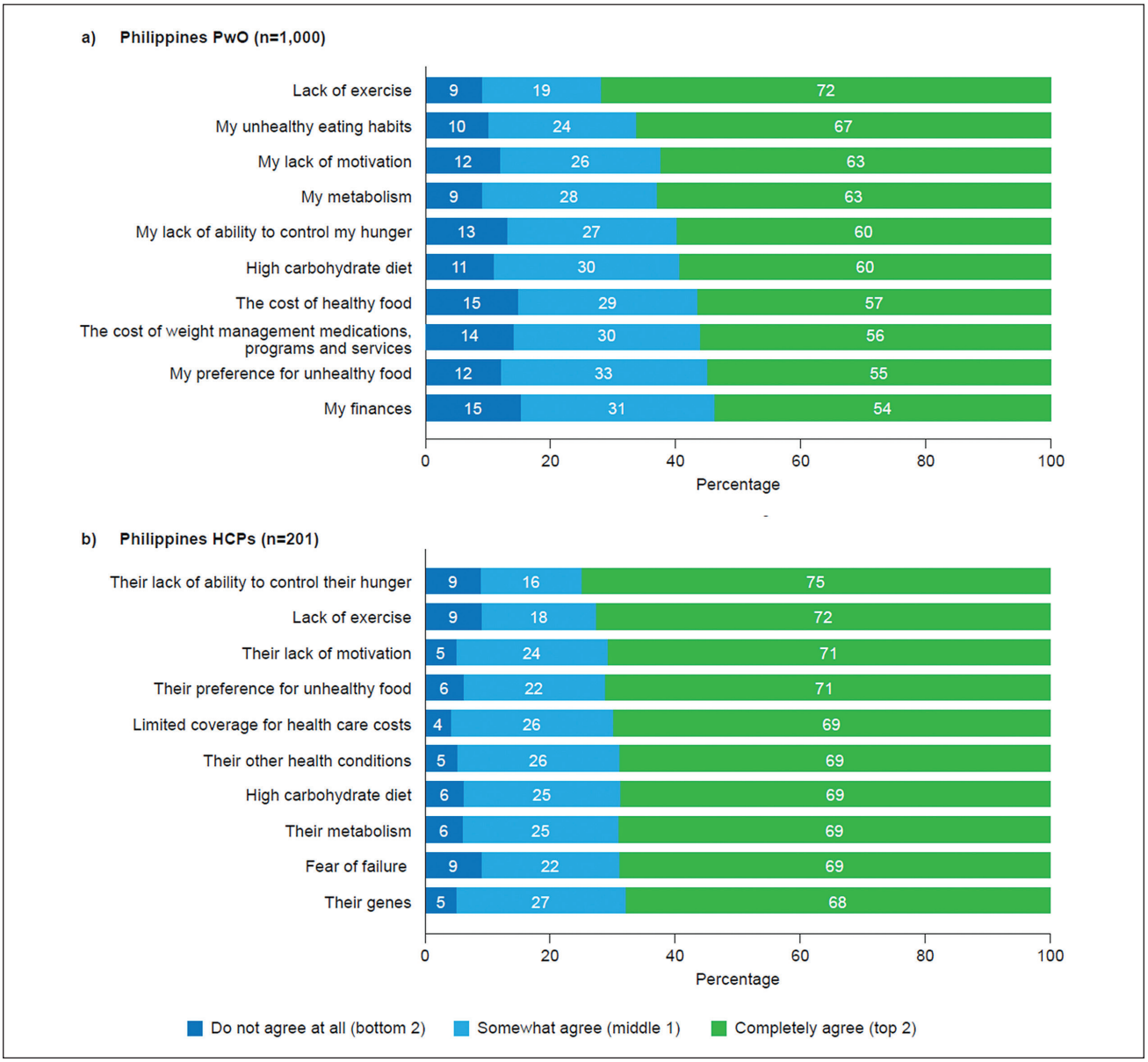

Figure 3. Top 10 barriers for weight loss in PwO.

[a] Based on the question to PwO, "How much do you agree that each of the following is a barrier to you losing weight?".

[b] Based on the question to HCPs, "How much do you agree that each of the following is a barrier to your patients losing weight?"

Due to rounding, the total of the three categories within each entry may not add up to exactly 100% when calculated based on the whole numbers shown.

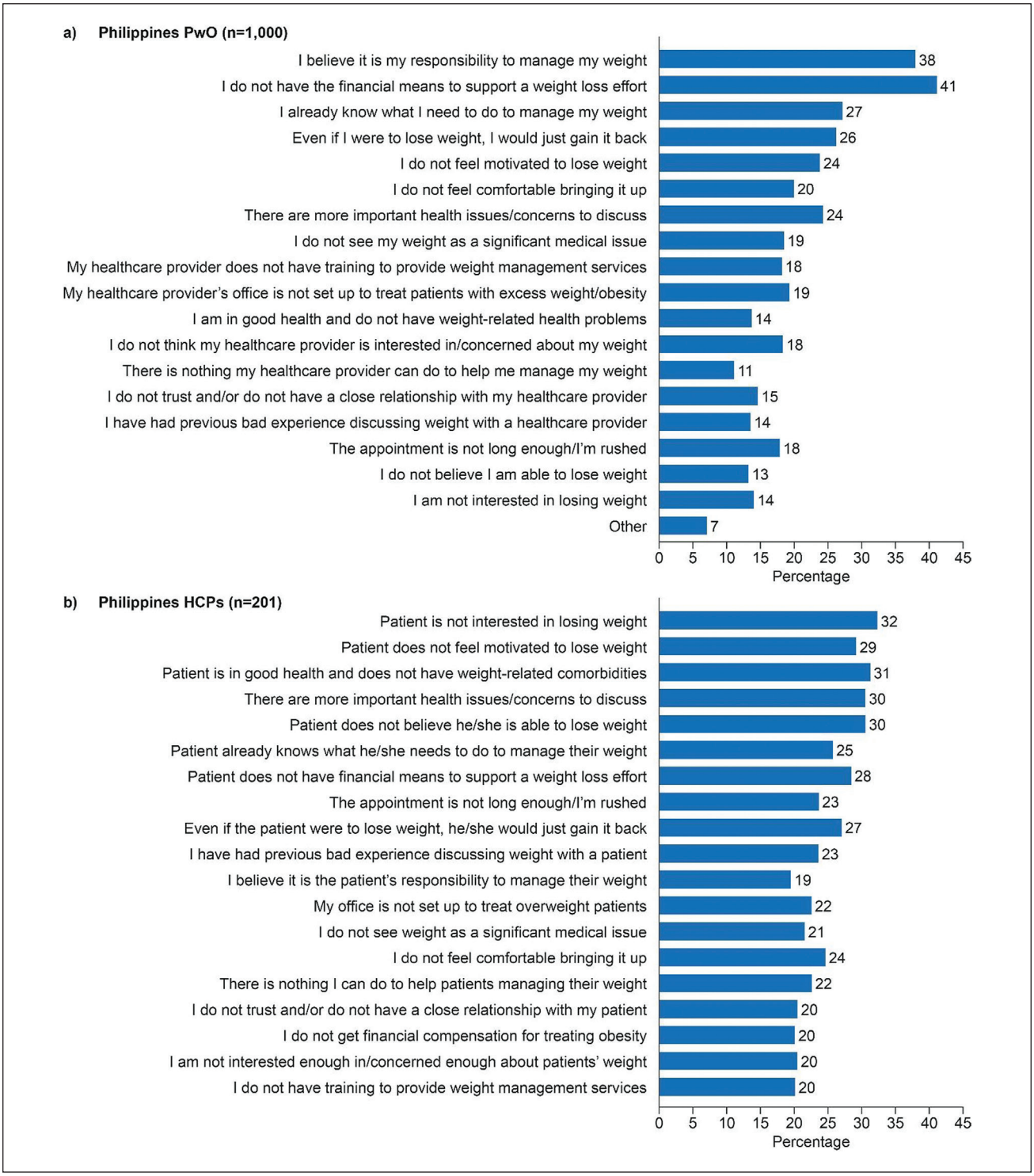

Figure 4. Top reasons for not having a weight discussion.

[a] Based on the question to PwO, "Which of the following are/would be the top five reasons for which you might not discuss managing your weight with your healthcare provider?".

[b] Based on the question to HCPs, "What are the top 5 reasons for which you might not discuss obesity with a patient?" Respondents could select up to five answers in response to this question.

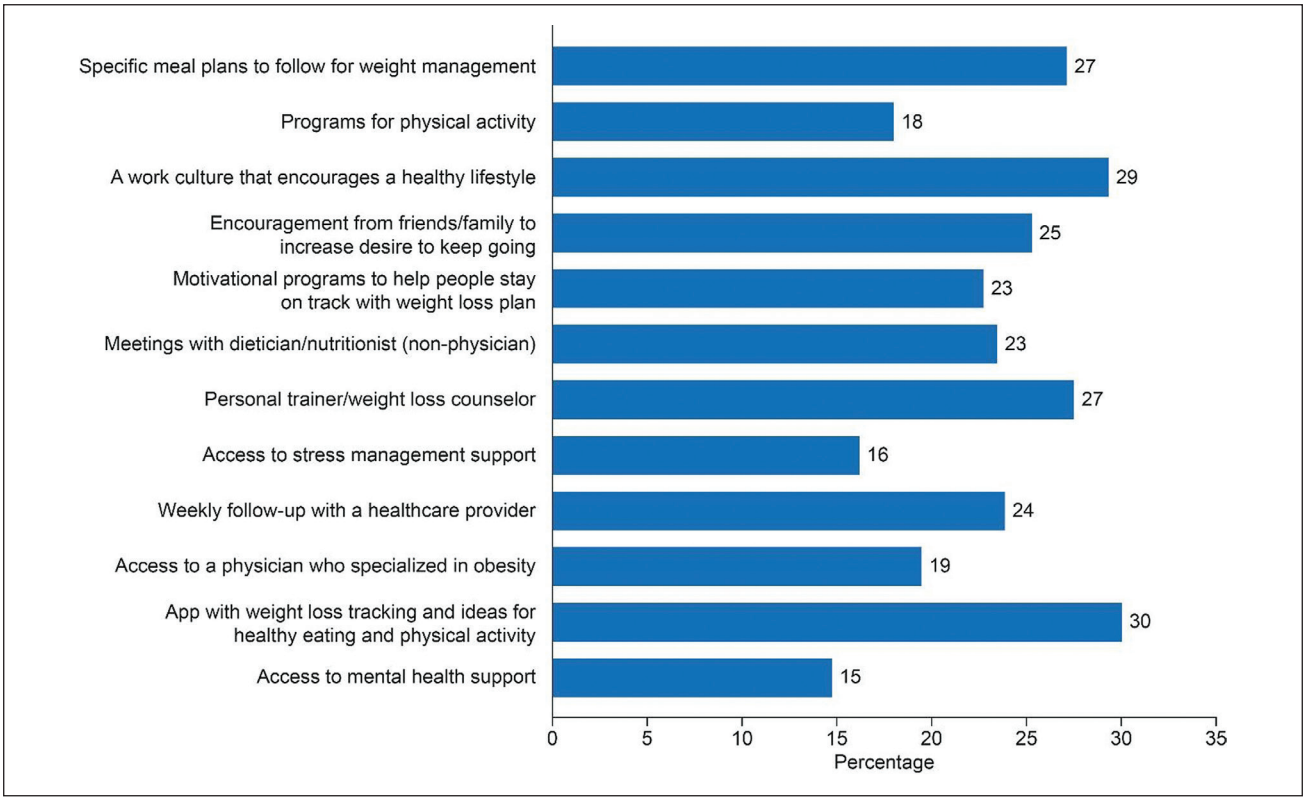

Figure 5. Methods recommended by HCPs for weight management.
Based on the question to HCPs, "What are the top 5 types of support that would be most helpful for your patients to be successful with managing their weight?"

DISCUSSION

The results of the ACTION APAC study provided a comprehensive exploration of the perceptions and attitudes on obesity and its treatment in the Philippines, incorporating the perspectives of both PwO and HCPs. The results of this study largely corroborated those from the rest of the APAC region,[20] and from other ACTION studies,[22–24] with a few notable exceptions, which will be discussed.

HCPs and PwO: Where do they agree and where are they misaligned?

HCPs and PwO were generally aligned in motivations for weight loss and broadly agreed that some of the top barriers for PwO to lose weight were lack of exercise, preference for unhealthy food and metabolism.

However, HCPs identified the impact of other health conditions, including limited mobility due to physical health problems and a lack of understanding of what obesity is as greater barriers to weight loss than PwO. These discrepancies are most likely due to HCPs having more medical knowledge than PwO and recognizing how obesity fits in the bigger picture of overall health.

There was also a discrepancy between HCPs and PwO over perceptions of the stigma surrounding obesity. Fewer HCPs than PwO believed that having obesity made it harder for PwO to form a romantic relationship, get a job and be successful in the workplace. Similarly, HCPs considered the negative impact that obesity had on other people's perception of the athleticism, health and willpower of the PwO to be less than what the PwO themselves considered. Although the stigma itself will be discussed later, the misalignment in the perception of stigma is an important finding.

Interactions between PwO and HCPs

The misalignment in the perception of stigma between PwO and HCPs may explain the communication gap that the study reveals. The study found that fewer than half of PwO chose to discuss their weight with their HCPs in the past 5 years. This is a critical finding, as early and regular dialogue about weight could facilitate more effective management strategies.

The initiation of dialogue about weight loss was roughly evenly split between PwO and HCPs, with 46% of PwO versus 59% of HCPs believing they started the conversation. Around a third of HCPs cited their patients' lack of interest (32%) and motivation (29%) as reasons for not initiating a conversation about weight loss, though it is worth noting that these figures are higher in the rest of the APAC region (41% and 37%, respectively).[20] PwO, on the other hand, were generally in favor of HCPs initiating such dialogue, citing the top reasons for not discussing weight as lack of financial means to support their weight-loss effort (41%) and believing it was their responsibility

(38%). Additionally, most PwO felt positive after such a discussion. These discrepancies indicate that there is a feeling among both HCPs and PwO that the burden and responsibility of obesity management lies with the patient and highlights a problem with the understanding of the condition. In a separate question, a very substantial 91% of PwO agreed that their weight loss was completely their responsibility. This figure was higher than the rest of the APAC region (87%),[20] the IO (81%),[24] Canada (74%)[23] and the US (82%).[22] Why it is so high in the Philippines is unclear and warrants further investigation.

Patients' concerns about financial implications can be addressed when considering the allocation of resources and the inclusion of obesity treatment in healthcare insurance, but feelings of responsibility for their health condition, along with assumptions by HCPs about the patient's interest and motivation place an unhelpful burden on patients. Such a burden may lead to feelings of shame that are not fully understood by the HCP, as reported by their lack of understanding around weight stigma.

Weight stigma and its impact

Internalized and external stigma is a common experience for PwO, with negative consequences for both their physical and mental health and is a reason that PwO may be reluctant to seek medical care.[25] The psychosocial aspects that create barriers to obesity management must therefore not be underestimated and can be addressed by involving psychologists and counsellors in obesity management and employing techniques such as motivational interviewing.[26,27] HCPs must be vigilant about their attitudes towards PwO since their assumptions, even if not stated explicitly, can undermine trust in the therapeutic relationship.[21]

The need for education: PwO and HCPs

Much of this stigma can be overcome by increasing the understanding that obesity is a chronic illness. As seen in the APAC study,[20] and in other ACTION studies,[22–24] the majority of HCPs (88%), and to a lesser extent PwO (65%), agree with this statement but this is not reflected in the management of the condition. Here, education of both PwO and HCPs and a deeper understanding of the biological mechanisms that make achieving and maintaining weight loss so difficult,[28–30] will help to set realistic weight-loss goals. This will also highlight the need for support and a collaborative approach to obesity management, encouraging PwO to seek medical help. It is important that when speaking to patients about their weight, HCPs acknowledge the roles of genetics, environmental influences and individual physiology in obesity risk,[21] reinforcing the understanding that obesity is an illness and reducing the focus on personal responsibility, willpower and motivation.

On a similar note, both PwO and HCPs show a preference for lifestyle modifications over pharmacological or surgical interventions. This preference, while understandable, may limit the utilization of potentially beneficial treatments, especially when lifestyle changes alone prove insufficient. The reluctance of HCPs to prescribe weight-loss medications or refer for bariatric surgery, primarily due to a lack of knowledge and concerns about side effects, indicates a need for better education and training. This should include up-to-date information about the safety and efficacy of potential treatments, which would give HCPs the confidence to make full use of medical interventions. Bariatric surgery results in more extensive and often longer-lasting weight loss compared with lifestyle changes and pharmacotherapy with little risk of serious complications[21] but HCPs consider it a last resort, with 61% considering the cost a major barrier. Again, education about the benefits of surgery and its potential to reduce future costs of accumulating comorbidities should be considered when investing in healthcare.

Cultural factors

Although stigma and lack of education play a key role in preventing PwO from seeking medical help, it is worth noting that there may be cultural aspects at play that have similar results, but for opposite reasons. Of PwO in the Philippines, 57% said they were happy with their current weight. This figure is higher than in the rest of the APAC region (39%)[20] and considerably higher than Canada (20%),[23] IO (6%),[24] or the US (20%).[24] Similarly, 62% of PwO in the Philippines regarded themselves as normal or overweight rather than obese, compared with 45% in the APAC region overall[20] and 50% in both the IO[24] and the US.[22] This may be partly due to confusion regarding different BMI thresholds for obesity. The general public in the Philippines may know obesity as meeting the World Health Organization BMI threshold of ≥30 kg/m^2 rather than the APAC cutoff of ≥25 kg/m^2. The difference in thresholds is based on the evidence that Asian populations are at a higher risk of obesity-related comorbidities at lower BMI levels compared with other populations.[17] However, the acceptance of a higher BMI agrees with one study that found no correlation between health-related quality of life and higher BMI in Filipino adults, and some evidence that those with higher BMIs had better social functioning.[31] It is important to note that acceptance of higher BMIs as healthy and normal may be partly responsible for problems with obesity in the Philippines. In more traditional cultures, large bodies have positive associations[32] and higher body weight is associated with higher social status, particularly in lower- and middle-income countries like the Philippines.[33] This can in part be remedied by public education about obesity awareness and healthy weight, considering cultural differences (discussed below) and biological differences such as the increased adiposity of Asian populations[34] and their increased risk for non-communicable diseases.[9–11,34] However, as countries develop, the positive association observed between obesity and socioeconomic status can be reversed[33] and the message of public education should be carefully considered, as preliminary evidence suggests that anti-obesity messaging leads to an increase in anti-obesity stigma.[32]

Nevertheless, education is particularly important owing to the discordance between known future risks of health complications and the current quality of life related to an increased BMI.[31] A study of adults in Metro Cebu found a significant correlation between obesity awareness and both higher educational attainment and socioeconomic status,[2] indicating that public education should focus on those who have lower educational attainment and socioeconomic status. However, there is also a link between higher educational attainment and the odds of having excess weight,[3] indicating that awareness of obesity alone is not sufficient to prevent it. An effective educational strategy aimed at PwO and those at risk of obesity should take the form of practical workshops with an emphasis on applying knowledge on obesity, rather than lectures alone.[2]

The Better Health Project showed success using a collaborative approach and Local Learning Networks in the Philippines to provide continuing professional development courses on non-communicable disease topics to HCPs using e-Learning platforms and could prove informative about how such education could be delivered to both HCPs and PwO.[35,36]

Informed by the success of the Better Health Project and results from this survey, including the information that 95% of PwO reported using the internet, social media and smartphone applications for obesity management resources, a communication platform could be created to help change how PwO and HCPs manage, treat and support obesity.

Strengths and limitations

A key strength of this study was the large number of participants and high response rate. The inclusion of both PwO and HCPs gave an excellent insight into both sides of what should be a collaborative relationship. The breadth of questions addressed in the survey allowed for consideration of a wide number of topics, including aspects of weight bias and stigma.

As similar surveys were used in the other ACTION studies, we were able to compare data across these countries and draw conclusions about cultural and socioeconomic factors affecting obesity care.

A key limitation of this study was that it was a self-reported cross-sectional survey and therefore may not be a true representation of all PwO and HCPs. Geographic distribution showed a bias toward urban areas, and whilst selection bias was mitigated by weighting the PwO data to represent demographic targets for age, gender, household income, education and region, this remains a potential limitation.

The BMIs of HCPs may also be considered as a limitation as their own body weight may have affected their perceptions of obesity; the BMI of HCPs was not recorded in the survey so this cannot be examined but may be interesting for future study.

Another key limitation of this study is the potential mismatch between self-identified expertise and actual knowledge or competence, particularly in pharmacologic management of obesity. Additionally, our definition of 'obesity specialist' – based on patient volume – may not fully capture the breadth or depth of clinical expertise.

Finally, the weights were self-reported and it has been previously shown that when self-reporting, participants may underestimate their BMI.[37] Moreover, BMI may not be a true representation of adiposity, since a higher BMI in Filipina women is associated with a higher grip strength and muscle mass.[38] Central obesity may be a more useful measure, as it directly causes physical/mobility limitations and indirectly affects activities of daily living through chronic disease morbidity.[38]

CONCLUSION

The ACTION study in the Philippines gives critical insights into perceptions, attitudes and behaviors surrounding obesity management. The recognition of obesity as a chronic disease by both PwO and HCPs is a positive foundation for the management of obesity, but this requires greater focus on the impact of stigma, improving communication between PwO and HCPs and better understanding of treatment options.

To enhance obesity care in the Philippines, several strategies could be considered:

- Enhanced training for HCPs: providing HCPs with more comprehensive education on the psychosocial aspects of obesity and the full range of treatment options, including pharmacological and surgical interventions.
- Facilitating open dialogue: encouraging more proactive discussions about weight between PwO and HCPs through routine check-ups and creating a supportive environment that mitigates stigma.
- Addressing weight stigma: implementing public health campaigns and policies aimed at reducing the stigma associated with obesity to encourage PwO to seek help early and frequently.
- Addressing attitudes to obesity: public health campaigns and policies should consider the specific cultural aspects of the Philippines and ensure that they include culturally relevant discussions on healthy weight and how it is affected by biological differences in the Filipino body type.

By addressing these areas, the gap between understanding obesity as a chronic condition and effectively managing it can be bridged, leading to better health outcomes for individuals with obesity in the Philippines.

Statement of Authorship
All authors certified fulfillment of ICMJE authorship criteria.

CRediT Author Statement
NNJ: Conceptualization, Methodology, Investigation, Writing – review and editing; **EJT:** Conceptualization, Methodology, Software; **CJ:** Conceptualization, Writing – original draft preparation, Writing – review and editing, Visualization; **JF:** Writing – review and editing; **CP:** Resources, Writing – original draft preparation, Supervision, Project administration, Funding acquisition; **DL:** Conceptualization, Validation, Investigation, Writing – original draft preparation, Writing – review and editing, Funding acquisition.

Data Availability Statement
The data used and/or analyzed in this manuscript are proprietary but will be made available from the corresponding author upon reasonable request.

Author Disclosure
Dr. Nemencio Nicodemus Jr. is the immediate past President of the Philippine Association for the Study of Overweight and Obesity and has received speakership honoraria for obesity-related discussions from pharmaceutical companies.

Dr. Edgardo Juan Tolentino is a past President of the Philippine Association for the Study of Overweight and Obesity.

Dr. Cecilia Jimeno is the Vice Editor-in-Chief of the Journal of the ASEAN Federation of Endocrine Societies. She receives honoraria as a member of the speakers' bureau of Sanofi Aventis, Merck, Abbott, Menarini, and GSK, and serves as a member and Treasurer of the Board of Directors of the Philippine Lipid and Atherosclerosis Society.

Dr. Joy Arabelle Fontanilla receives consulting fees from Novo Nordisk and Zuellig Pharma as an Advisory Board member and receives speakership honoraria from the same companies. She is a Board Member of the Philippine Society for Parenteral and Enteral Nutrition, past President of the American Association of Clinical Endocrinologists – Philippine Chapter, and Head of the Center for Weight Intervention and Nutrition Services at St. Luke's Medical Center Global City, Philippines.

Drs. Cyrus Pasamba and Danieson Lampano are employees of Novo Nordisk Pharmaceuticals Philippines.

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SUPPLEMENT

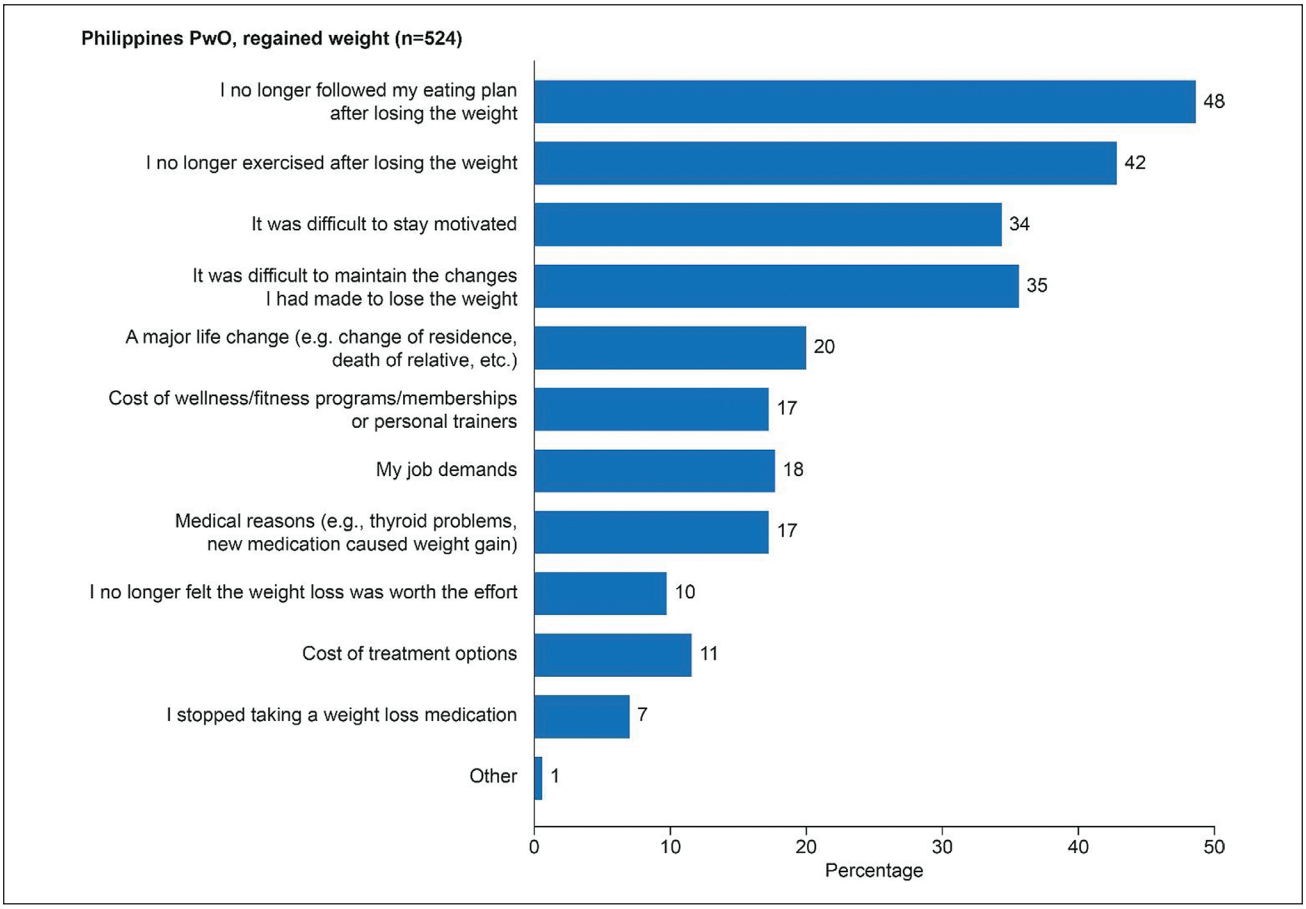

Figure S1. Reasons for regaining weight according to PwO.

Percentage of people with obesity (PwO) who indicated their level of agreement was a 4 or a 5 on a 5-point scale where 1 meant “Do not agree at all” and 5 meant “Completely agree.”