Dubai Diabetes and Endocrinology Journal
Volume 30, Issue no. 1-2, DOI 10.18502/ddej.v30i1-2.17931
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Research Article

The Impact of Obesity in the UAE: Real-world Physician and Patient Perspectives

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Abstract

Background: Limited evidence exists on the impacts of obesity in the United Arab Emirates (UAE). Real-world evidence is required to support obesity-related healthcare decision-making in the UAE.

Materials and Methods: The Adelphi Real World Obesity Disease Specific Programme™ is a multicountry , cross-sectional survey with retrospective data capture including physicians directly involved in chronic weight management and people living with obesity (PwO) presenting to them in a real-world clinical setting. UAE data were collected between April and August 2022. Physicians completed online questionnaires reporting demographics and clinical characteristics for eligible PwO (aged ≥18 years participating in a weight management plan and/or presenting with a body mass index [BMI] ≥30 kg/m^2). PwO voluntarily completed questionnaires reporting out-of-pocket costs and patient-reported outcomes: Work Productivity and Activity Impairment Questionnaire (WPAI), Short Form 36 v2 Health Survey (SF-36v2), Jenkins Sleep Evaluation Questionnaire (JSEQ). Analyses were descriptive.

Results: 41 physicians identified 201 PwO; 49% were male and 65% were of Middle Eastern origin. Mean age, BMI, and median time since obesity diagnosis were 39.1 years, 33.7 kg/m^2, and 11.5 months, respectively. PwO (n = 84) reported a mean of 7.4% monthly household income spent on medicine for weight and weight-related health conditions. Mean WPAI was 35.3% activity impairment and 37.5% overall work impairment due to obesity. Generally, SF-36v2 scores were <47, indicating impairment, and mean JSEQ score was 3.6.

Conclusion: PwO in the UAE had a high level of complications and measurable negative obesity-related impacts. These data may contribute to improving obesity awareness and management in the UAE.

Keywords: obesity, burden of disease, health related quality of life, work productivity and activity impairment, UAE

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Received: August 14, 2024
Accepted: November 3, 2024
Published: December 31, 2024

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How to cite this article: Nawar R, Bhatti R, Tangi F, Rai S, Isailovic T, Khare S, et al. The Impact of Obesity in the UAE: Real-world Physician and Patient Perspectives. *Dubai Diabetes and Endocrinology Journal*. 2024;30(1-2):19–36. DOI 10.18502/ddej.v30i1-2.17931

1. Introduction

It is estimated that 1 billion people will be living with obesity globally by 2030 [1]. Obesity is an excess accumulation of fat that impairs health and is defined by the World Health Organization (WHO) as a body mass index (BMI) ≥30.0 kg/m^2 in adults [2]. It is recognized as a chronic relapsing disease and is associated with multiple complications including cardiovascular disease, type 2 diabetes (T2D), sleep apnea, and cancer [3–5]. In addition, obesity is associated with significant psychological issues such as anxiety, depression, and stress [6]. Obesity also negatively impacts on health-related quality of life (HRQoL) and measures of productivity [7].

The World Obesity Federation (WOF) reports that 31% of women and 25% of men in the United Arab Emirates (UAE) have obesity [8]. According to the WOF, the economic impact of obesity in the UAE was estimated at 11.67 billion USD—the equivalent of 2.8% of the gross domestic product in 2019. This is projected to increase over the coming decades [9–10], with the WOF estimating an approximately 15-fold increase to 179.29 billion USD by 2060 [10].

Clinical recommendations for the management of obesity in the UAE advise a multidisciplinary approach including diet, exercise, and behavioral therapy [11]. Pharmacotherapy and bariatric surgery are recommended in people living with obesity (PwO) with BMIs above specific thresholds and in the presence of associated complications [11]. In the UAE, there are only a limited number of approved anti-obesity medications (AOMs), including orlistat, naltrexone/bupropion, and liraglutide, but these have modest efficacy [12–15]; while semaglutide and tirzepatide have recently been licensed for the management of obesity [16], neither were approved for the treatment of obesity in people without diabetes at the time of data collection. The UAE recommendations for the management of obesity align with several other established guidelines [11, 17–19]. Management should take a patient-centered approach, identifying physician and PwOs' preferences in treatment approaches to further support weight loss [11, 20].

Currently, limited evidence exists on the impacts of obesity, both direct and indirect, in the UAE. Further real-world evidence is required to support healthcare decision-making related to obesity in the UAE.

This study describes the sociodemographic and clinical characteristics of PwO in the UAE included in the multicountry Adelphi Real World Obesity Disease Specific Programme™ (DSP), the impact of obesity on work productivity and HRQoL, and treatment approaches, to build on the limited obesity literature available in the UAE.

2. Materials and Methods

2.1. Study Design and Participants

The Adelphi Real World Obesity DSP is a multicountry, cross-sectional survey with retrospective data capture including physicians and PwO presenting to them in a real-world clinical setting, with UAE data collected between April and August 2022 [21–22].

UAE-based eligible primary care physicians (PCPs), endocrinologists, and obstetricians who were personally responsible for the obesity management decisions of at least 10 PwO per month were identified and invited to participate in the DSP.

PwO inclusion criteria were as follows (at the time of data collection): age ≥18 years old, on a weight management program, and/or a BMI of ≥30 kg/m^2. Participants were identified as one of two groups: (i) not on an AOM or (ii) on an AOM, targeting a sample size of 100 patients per group. PwO who were participating in an obesity-related clinical trial at the time of data collection were excluded.

Although all included PwO were required to have an obesity diagnosis, at data collection PwO could have achieved their weight loss goals and present with a BMI of <30 kg/m^2.

2.2. Data Collection and Outcomes

Physicians completed questionnaires for the next five consecutive PwO meeting the inclusion criteria described above who were presenting for a routine care consultation (Figure **1**). This number of PwO was chosen to minimize the burden on each physician and thus maximize the number of physicians sampled. The physician questionnaire covered patient demographics, clinical assessments, clinical outcomes, complications, referral and consultation details, and previous and current (at the time of questionnaire completion) management approaches (diet, exercise, behavioral therapy, pharmacotherapy, and bariatric surgery). The number of previous weight loss attempts, reason for current weight loss, and feelings of PwO about their weight (assessed on a 5-point Likert scale; 1 = not at all bothered, 5 = very bothered) were also reported.

PwO were invited to complete a voluntary questionnaire; questionnaires that were completed by PwO were then matched to their respective physician-reported questionnaires (Figure **1**). These questionnaires included patient-reported outcome measures (PROMs) on activity impairment and productivity at work (Work Productivity and Activity Impairment Questionnaire [WPAI; where the extent of difficulty performing work and days missed due to obesity is measured, with higher scores indicating greater impairment [23]]) and HRQoL (Short Form 36v2 Health Survey [SF-36v2] and the Jenkins Sleep Evaluation Questionnaire [JSEQ]). The SF-36v2 includes eight health domains (physical functioning, role limitations due to physical problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems, mental health) and two summary scores (physical component summary, mental component summary); scores range from 0 to 100, with higher scores indicating better HRQoL. T-scores were standardized to the 2009 US general population with a mean of 50 and a standard deviation (SD) of 10. The average range of functioning for groups is a mean T-score between 47 and 53. Group-level scores <47 indicate impairment [24]. The JSEQ is a four-item tool covering sleep difficulties and fatigue, and an overall mean score (0 = no sleep problems, 20 = most sleep problems [25]) was reported. PwO also reported their healthcare spending (out-of-pocket costs to PwO) and physician consultations. The

results of these PROMs were reported for the overall PwO sample and per BMI subgroup; PwO 25–29.9 kg/m^2 and PwO ≥30 kg/m^2.

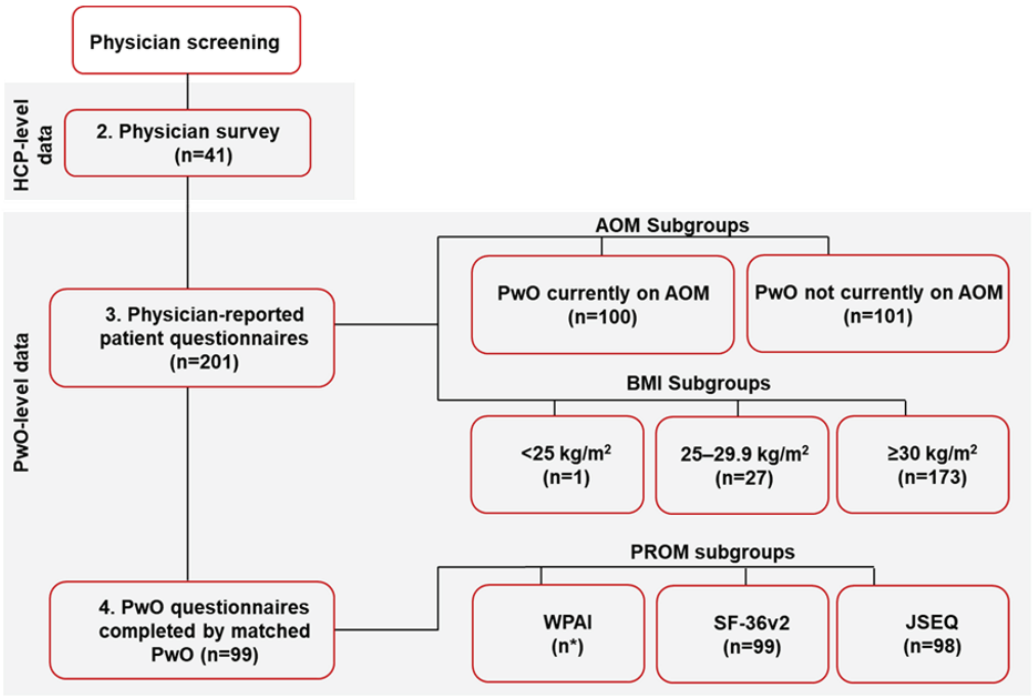

Figure 1: Obesity DSP methodology. *Number of PwO varies depending on WPAI domain. The *n* number refers to the UAE population only. AOM, anti-obesity medication; BMI, body mass index; DSP, disease specific programme; HCP, healthcare provider; JSEQ, Jenkins Sleep Evaluation Questionnaire; PROMs, patient-reported outcome measures; PwO, people living with obesity; SF-36v2, Short Form 36 v2 Health Survey; UAE, United Arab Emirates; WPAI, Work Productivity and Activity Impairment Questionnaire.

2.3. Ethics Approval

The survey was performed in accordance with relevant guidelines; ethics exemption was obtained from the Pearl Institutional Review Board (#22-ADRW-136). All patients provided written informed consent for the use of their data, which were anonymized and aggregated. No medication was provided, and no tests or investigations were performed as part of this research. No hypothesis was developed or tested.

2.4. Statistical Analysis

The sample size was dependent on country-specific data sources. All analyses were descriptive; continuous variables were described using mean and SD or median and interquartile range (IQR) depending on data distribution, and categorical variables were described as numbers and percentages. Physician-reported outcomes are based on the total sample (*N* = 201; e.g., patient characteristics, weight loss attempts), while PROs are based on those who completed the self-reported questionnaires (*N* = 99). Physician-reported complications and management approaches and PROs were reported for the overall

PwO sample and per PwO BMI subgroup: 25–29.9 kg/m^2 and ≥30 kg/m^2. Missing data were not imputed and as such the number of PwO per variable may differ; therefore, numbers of PwO are reported per analysis.

3. Results

3.1. Physician-reported Outcomes

3.1.1. PwO Demographics

In total, 41 physicians (51.2% PCPs, 24.4% endocrinologists, and 24.4% obstetricians) provided data on 201 PwO, of which 50% of PwO were receiving an AOM (per established quotas). The mean age of PwO was 39.1 years old and genders were balanced (49% male). Most PwO were of Middle Eastern origin and had never smoked while 12% and 9% currently smoked cigarettes and shisha, respectively. Almost two-thirds of PwO were employed (Table **1**). The mean (SD) BMI at data capture and median (IQR) time since obesity diagnosis were 33.7 (4.7) kg/m^2 and 11.5 (5.3, 28.4) months, respectively. The majority of PwO had Class 1 obesity (30 ≥ BMI < 35 kg/m^2) and the most common complications (occurring in ≥10% of PwO) were hypothyroidism, polycystic ovarian syndrome (PCOS), depression, hypertension, and T2D (Table **2**). Physicians reported that they did not plan to refer 70.6% of PwO to other healthcare professionals (HCPs) for further management; however, among the PwO they were planning to refer, 18.9%, 12.4%, and 15.9% were going to be referred to a nutritionist/dietician/health coach, personal trainer, and others, respectively.

Table 1: Demographics for PwO.

	***N* = 201**
Mean age (SD), yrs	39.1 (9.4)
Male sex, %	49
Ethnicity, %	
Middle Eastern origin	65
– Emiratis	27
– Arabs	38
Asian–Indian subcontinent	25
Asian other	9
Patient's cigarette smoking status, %	
Current smoker	12
Ex-smoker	14
Never smoked	73
Don't know	1
Patient's shisha smoking status, %	
Current smoker	9
Ex-smoker	14

Table 1: Continued.

	***N* = 201**
Never smoked	77
Employment status, %	
Working	65
Not working	35

PwO, people living with obesity; SD, standard deviation

Table 2: Clinical characteristics.

	***N* = 201**
PwO receiving an AOM, %	50
Mean BMI (SD), kg/m^2	33.7 (4.7)
Median time since obesity diagnosis (IQR), months	11.5 (5.3, 28.4)
BMI categories[a], %	
Overweight (25 ≥ BMI < 30 kg/m^2)	13
Obese Class I (30 ≥ BMI < 35 kg/m^2)	56
Obese Class II (35 ≥ BMI < 40 kg/m^2)	21
Obese Class III (BMI ≥ 40 kg/m^2)	9
Comorbidities reported in ≥10% of PwO, %	
Hypothyroidism	29
Polycystic ovary syndrome	37% of women
Depression	18
Hypertension	18
Type 2 diabetes (with and without chronic conditions)	16
Prediabetes	15
Type 2 diabetes without chronic complications	14
Insulin resistance	14
Dyslipidemia	13
Type 1 diabetes (with and without chronic conditions)	12
Anxiety	11
Type 1 diabetes without chronic complications	10
Sleep apnea	10

[a]At point of data collection
AOM, anti-obesity medication; BMI, body mass index; IQR, interquartile range; PwO, people living with obesity; SD, standard deviation

3.1.2. Consultations

The main reason for the initial consultation with the managing physician on obesity for PwO (*n* = 201) was the discussion and treatment of weight and obesity (67.7%) followed by the discussion and treatment of complications affected by weight and obesity (47.3%). In 12.4% and 8.0% of PwO, the reason for the initial consultation was a regular check-up, and discussion and treatment of complications unrelated to weight, respectively.

3.1.3. Weight Loss Attempts

In the last 3 years, physicians reported that PwO (*n* = 180) made a mean (SD) 4.5 (3.2) weight loss attempts. The main reasons for starting the current weight loss attempt were: PwO's request—tried lifestyle change with many failed previous attempts (42.8%); PwO had complications that could put overall health at risk if weight was not lost (31.8%); and PwO wanted help in maintaining weight loss in the longer term (30.8%). At the time of the survey, physicians described the weight loss journey of PwO (*n* = 96) as "never succeeded in losing any weight" (*n* = 6; 6.2%); "rapid weight loss but then regain weight since" (*n* = 4; 4.2%); "rapid weight loss with maintenance of weight loss to current day" (*n* = 22; 22.9%); "slow weight loss but then regain weight since" (*n* = 8; 8.3%); and "slow weight loss with maintenance of weight loss to current day" (*n* = 56; 58.3%).

3.1.4. Management Approaches

Aside from weight reduction, the main physician-reported treatment goal for PwO was to "Improve overall quality of life" (66.2%) followed by "Improve mobility" (41.3%) and "Improve mental health" (30.8%).

Considering previous management approaches, "Patient's own diet" and "Patient's own exercise regime" were the most frequently reported lifestyle changes according to physicians (Table **3**). "Patient's own diet" was reported by numerically more PwO ≥30 kg/m^2 (76.6%) than PwO 25–29.9 kg/m^2 (57.7%) while the proportion of PwO being managed using "Patient's own exercise regime" was numerically greater in the lower BMI group (Table **3**). Previous weight loss drug approaches tried included natural remedies or other over-the-counter (OTC) products at pharmacists/health food stores, and prescription and nonprescription AOMs. Approximately half (52.5%) of the included PwO had not previously used weight loss preparations, including nonprescription AOMs, natural remedies, or OTC products. Only 9.6% of PwO were using a prescribed weight loss drug (Table **3**). The most reported previous behavioral therapies were "Professional behavioral therapy" (9.1%), "Alternative behavioral therapy" (10.1%), and "Acupuncture" (9.6%). Only a small percentage of bariatric surgeries (sleeve gastrectomy) were recorded for PwO (2.0%). Of the remaining PwO who did not have bariatric surgery, 18.0% were identified by physicians as being potential candidates for weight loss surgery (*n* = 119).

In contrast, the most frequently reported current management approaches for PwO were "'Diets recommended and supervised by a dietician, nutritionist, health coach" and "Exercise regime agreed with a healthcare provider" (Table **3**). Considering BMI subgroups, a numerically greater proportion of PwO ≥30 kg/m^2 followed diets than PwO 25–29.9 kg/m^2, and a similar number of PwO in both groups followed exercise regimes (Table **3**). The proportion of PwO undertaking "Patient's own diet" and "Patient's own exercise regime" was numerically lower than in previous approaches, 29.9% and 32.3%, respectively. The proportion of PwO using a prescribed weight loss drug was 49.8%, as per the quota, and appeared balanced between BMI subgroups. The proportion of PwO undertaking

behavioral therapy numerically increased; 34.8% of PwO received "Professional behavioral therapy," which was numerically higher for PwO 25–29.9 kg/m^2 than PwO ≥30 kg/m^2 (40.7% vs. 34.1%, respectively).

Table 3: Management approaches according to BMI categories.

	Previous approaches, %				Current approaches, %			
	Overall	**<25**	**25–29.9**	**≥30**	**Overall**	**<25**	**25–29.9**	**≥30**
Drug approaches	***N* = 94**	***N* = 0**	***N* = 9**	***N* = 85**	***N* = 114**	***N* = 0**	***N* = 13**	***N* = 101**
Prescription weight loss drug	9.6	0	3.8	10.5	49.8	0	48.1	50.3
Nonprescription weight loss drug	16.2	0	11.5	17.0	5.5	0	0	6.4
Natural remedies or other product(s) OTC at pharmacists/health food shops/homeopath	27.3	0	23.1	28.1	3.0	0	0	3.5
Diet	*N* = 192	*N* = 1	*N* = 26	*N* = 165	*N* = 169	*N* = 1	*N* = 22	*N* = 146
PwO's own diet	73.7	0	57.7	76.6	29.9	0	44.4	27.7
Diet recommended and supervised by healthcare provider	17.2	0	30.8	15.2	29.9	100	22.2	30.6
Diet recommended and supervised by a dietician, nutritionist, health coach	16.2	0	23.1	15.2	39.3	0	22.2	42.2
Diet plan recommended by personal trainer	10.6	0	7.7	11.1	26.9	0	29.6	26.6
Diet involving a commercial patient support group	11.6	0	7.7	12.3	4.0	0	3.7	4.0
Diet involving a patient-led support group	11.6	0	23.1	9.9	7.5	0	7.4	7.5
Nonprescription diet foods	17.7	0	23.1	17.0	1.0	0	0	1.2
Following a low carb diet	23.2	100	19.2	23.4	34.8	0	25.9	36.4
Following a Mediterranean diet	9.1	0	3.8	9.9	12.4	0	18.5	11.6
Exercise	*N* = 158	*N* = 1	*N* = 21	*N* = 136	*N* = 164	*N* = 1	*N* = 22	*N* = 141
PwO's own regime	62.6	100	73.1	60.8	32.3	0	40.7	31.2
Exercise regime agreed with a healthcare provider	14.6	0	11.5	15.2	41.3	100	40.7	41.0
Exercise regime agreed by personal trainer	9.6	0	7.7	9.9	36.3	0	29.6	37.6
Behavioral and alternative therapy	*N* = 47	*N* = 0	*N* = 7	*N* = 40	*N* = 75	*N* = 0	*N* = 11	*N* = 64
Professional behavioral therapy—e.g., counselling/psychological help	9.1	0	0	10.5	34.8	0	40.7	34.1
Alternative behavioral therapy—e.g., hypnotherapy	10.1	0	11.5	9.9	3.0	0	0	3.5
Acupuncture	9.6	0	15.4	8.8	0	0	0	0
Weight loss surgery	1.0	0	0	1.2	0	0	0	0
Other responses[b]								
None	1.0	0	0	1.2	0	0	0	0

[a]AOMs were driven by enrolment targets for AOM use (100 patients in each of the two groups [not on an AOM and on an AOM]); [b]Data for "Don't know" was excluded from the analysis
AOM, anti-obesity medicine; OTC, over-the-counter; PwO, people living with obesity

3.2. PwO-reported Outcomes

3.2.1. Economic Burden and Measurements of Work Productivity

PwO (*n* = 84) reported a mean (SD) of 7.4% (8.0%) of monthly household income spent on medicine for weight and weight-related health conditions; PwO with a current BMI 25–29.9 kg/m^2 spent numerically more on average than those with BMI ≥30 kg/m^2 (mean [SD] 9.5% [13.3] vs. 7.2% [6.9]). The mean presenteeism was numerically similar between BMI subgroups and overall data; this was also true for absenteeism.

3.2.2. Impact of Obesity on HRQoL

The mean (SD) WPAI was 35.3% (27.7%) activity impairment (*n* = 93) and 37.5% (28.9%) overall work impairment (*n* = 44) due to obesity. Considering BMI subgroups, PwO 25–29.9 kg/m^2 reported numerically lower average scores for activity impairment than those PwO ≥30 kg/m^2 (27.1% and 37.2%) while overall work impairment appeared numerically similar between subgroups (PwO 25–29.9 kg/m^2, 35.4% vs. PwO ≥30 kg/m^2, 37.8%; Figure **2**).

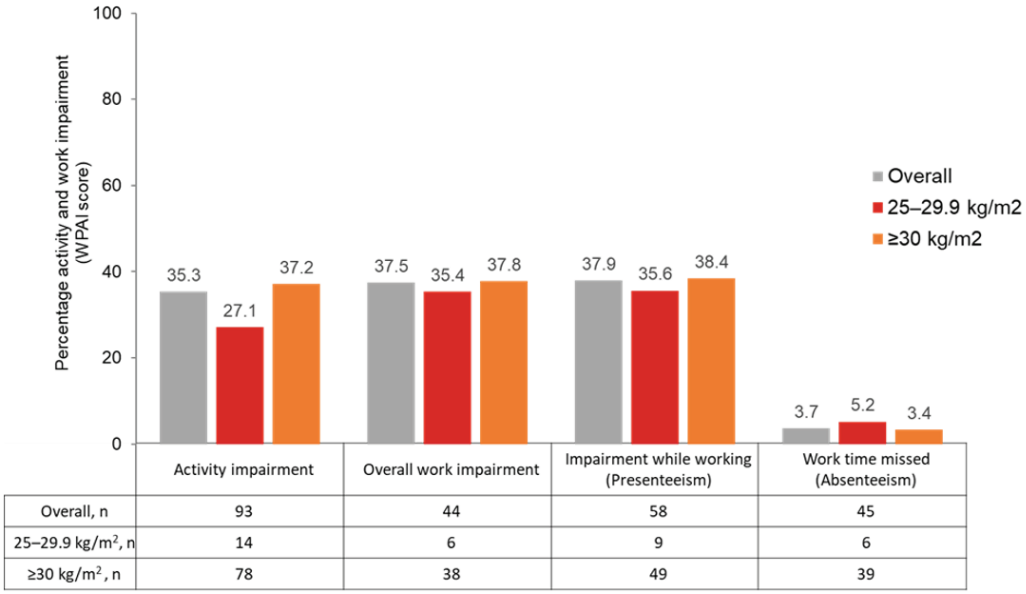

Figure 2: Patient-reported measures of productivity for PwO. PwO, people living with obesity; WPAI, Work Productivity and Activity Impairment Questionnaire.

In general, most of the overall SF-36v2 domain scores were below the norm. By BMI subgroup, PwO ≥30 kg/m^2 reported numerically lower domain scores than those PwO with a BMI of 25–29.9 kg/m^2 with the exception of social functioning. The physical component and mental component summary scores were both below the US general population norm (47) at 43.0 and 45.6, respectively (Figure **3**). The

median (IQR) JSEQ score was 2 (0, 6). Almost a third of PwO overall reported feeling very bothered about their current weight and 15.2% felt very embarrassed about their weight in public (Figure **4**).

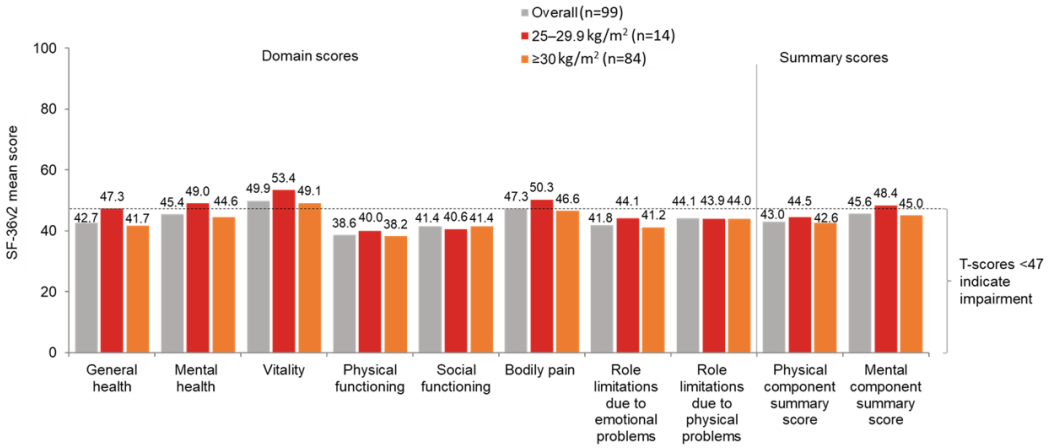

Figure 3: PwO-reported HRQoL based on the number of PwO completing the SF-36v2 (*n* = 99). HRQoL, health-related quality of life; PwO, people living with obesity; SF-36v2, Short Form 36 v2 Health Survey; a T-score of 47–53 is considered normal, and T-scores <47 indicate impairment.

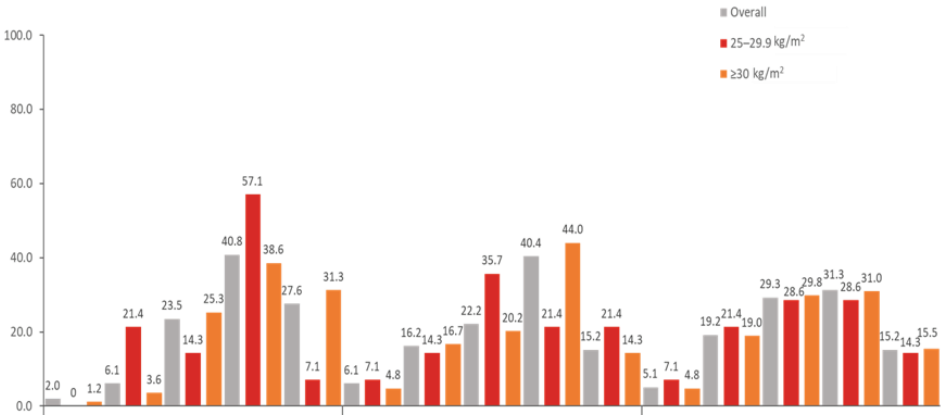

Figure 4: PwO feelings about their weight, as assessed on a 5-point Likert scale, where 1 = not at all bothered and 5 = very bothered. PwO, people living with obesity.

3.2.3. Physician Visits

The mean (SD) number of times a PwO reported seeing a physician for obesity-related concerns at least once in the preceding 12 months was 3.2 (3.22) for family doctor (responder *n* = 89); 2.0 (2.78) for endocrinologist (*n* = 56); 1.1 (2.16) for diabetologist (*n* = 54); 2.0 (3.03) for gynecologist (*n* = 54); and 1.1 (2.61) for obstetrician (*n* = 49). In contrast, PwO reported seeing physicians at least once in the preceding 12

months for other (non-obesity-related) concerns less, with the mean (SD) visits being 2.1 (2.32) for family doctor (*n* = 89) and 1.3 (2.15) for gynecologist (*n* = 55).

PwO (*n* = 95) consulted physicians for several complications that were associated with their weight. Hypothyroidism was the most common complication associated with weight, with 41.1% of PwO requiring physician consultations due to this complication. Approximately one-quarter of female PwO reported physician consultations for PCOS, and 22.1–25.3% of all PwO reported physician consultations for hypertension, T2D, prediabetes/impaired glucose intolerance, high total cholesterol levels, stress, and insulin resistance. PwO ≥30 kg/m^2 reported numerically higher frequencies of types of complications than PwO 25–29.9 kg/m^2 (Figure **5**).

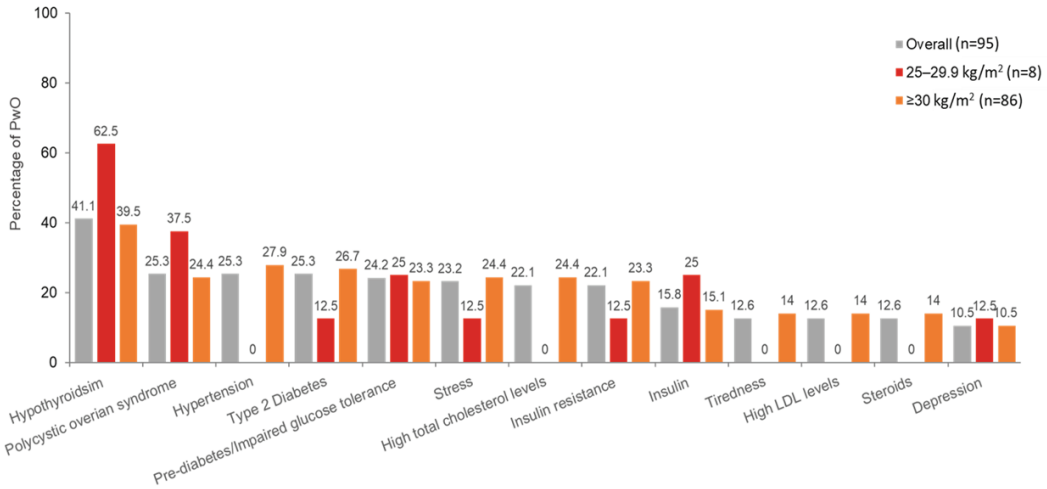

Figure 5: Complications associated with weight for which PwO had consultations. Complications shown were those occurring in >10% of PwO. LDL, low density lipoprotein; PwO, people living with obesity.

4. Discussion

Generally, in this real-world UAE analysis, the PwO that were included were equally distributed by gender, were middle-aged, and had Class 1 obesity. Numerical differences were observed in management approaches before and after PwO consulted with a physician. PwO with a BMI of ≥30 kg/m^2 were more likely than PwO with a BMI of 25–29.9 kg/m^2 to be following a diet recommended and supervised by a healthcare provider, dietician, nutritionist or health coach, while PwO with a BMI of 25–29.9 kg/m^2 were more likely than those with a BMI of ≥30 kg/m^2 to be undertaking their own exercise regime. Considering BMI subgroups, PwO ≥30 kg/m^2 seemed to have numerically lower scores than PwO 25–29.9 kg/m^2 in terms of HRQoL, and a numerically higher complication burden.

Sociodemographic data for PwO in the UAE were similar to a cross-sectional survey that investigated the prevalence and associated risk factors of overweight and obesity in 2142 adults in the UAE [26]. This was a larger study population with a similar mean age of PwO to our study. A significant association was observed for obesity and female gender, advanced age and nationality, among others ($P < 0.001$). Specifically, UAE

nationals, Arab non-nationals, and Asians had a higher risk of obesity than other nationalities [26]. In our study, most PwO were of Middle Eastern ethnicity.

Hypothyroidism was the most common complication in this UAE cohort, which is unsurprising as hypothyroidism has been previously linked to obesity [27–28]. The 2020 consensus statement on the diagnosis and management of hypothyroidism in Gulf Cooperation Countries [29] may also have raised awareness of the condition in these countries. Sleep apnea was reported in 10% of the UAE study population; the prevalence of sleep apnea highlights the importance of screening for sleep apnea in this population. Of note, 37% of women with PwO in this population had PCOS, which aligns with the close pathogenic links between obesity and PCOS [30–31] and suggests that monitoring of female PwO for signs of PCOS is warranted.

PwO in the UAE study population reported low HRQoL scores, as measured by SF-36v2. HRQoL was investigated in another study of treatment-seeking Arab PwO using the validated Arabic version of the ORWELL 97 questionnaire [7]. PwO were matched to people with normal weight (BMI ≥18.5 and ≤24.9 kg/m^2). Although a different validated questionnaire was used to evaluate HRQoL in our study, the outcomes showed a significant association between obesity and low HRQoL. Work productivity and HRQoL scores of PwO in our study appear similar to scores observed in adults with obesity in Italy, Germany, and the US [32–33]. Age and gender splits of PwO in these studies were similar to PwO in our study; the main difference at baseline between studies was ethnicity. Both studies evaluated HRQoL and work productivity using the SF-36v2 questionnaire and the WPAI questionnaire, respectively, and reported a trend in decreasing HRQoL and measures of productivity with increasing BMI. In the present study, numerically lower SF-36v2 domain scores and numerically greater activity impairment were reported by PwO with BMIs of ≥30 kg/m^2 versus 25–29.9 kg/m^2. These studies also noted that PwO and individuals with T2D tended to have worse outcomes. While the rate of T2D reported in our study (16%) was within the range reported in these studies (15–25%), our study did not investigate the impact of concomitant obesity and T2D on HRQoL and measures of productivity.

Absenteeism and presenteeism are also the indirect costs of obesity at individual and societal levels [34]. Although the allocated amount of household income was <10% in our study, absenteeism and presenteeism are not directly incorporated into the household cost. In general, the detrimental economic and societal aspects of obesity may affect household income, leading to greater inequities. Management approaches included AOMs (nonprescription and prescription), natural remedies or OTC preparations, lifestyle changes, and bariatric surgery. Reports in the literature from outside the UAE suggest AOM prescribing rates can be 1% or less [35–37]. More efficacious options with greater weight loss and improved side effects are needed to increase AOM utilization [14, 38–39]. Lifestyle changes encompassed diet, exercise, plus behavioral and alternative therapy. A study in the UAE investigated the effectiveness of a lifestyle intervention program encompassing diet, exercise, and behavioral interventions. While this study concluded that the intervention was successful in achieving 5% weight loss, which was sustained at the 1-year follow-up, this was in a small sample of participants (*n* = 28) [40]. In 2021, six AOMs were approved

by the US Food and Drug Administration (FDA) for the long-term treatment of obesity; at least 5% weight loss was achieved with each AOM (48–86%) [41]. Tirzepatide is the latest AOM to be approved by the FDA for the long-term treatment of obesity [42]. In the UAE, tirzepatide and semaglutide have recently been approved for the treatment of obesity [16].

Bariatric surgery was reported for a small percentage of included PwO in the UAE, which may be because most had Class 1 obesity. A previous single-center study of bariatric surgery in the UAE reported significant improvements in metabolic markers in people with Class 2 and Class 3 obesity in the short term [43], and the long-term (24-month) follow-up confirmed the significant results for weight loss, and improved metabolic markers were maintained [44].

Most PwO cited the discussion and treatment of obesity as the reason for their initial consultation; despite this, and considering the average BMI (33.7 kg/m^2) in this population, most physicians did not plan to refer PwO for further weight management. A potential explanation for the low rate of onward referral could be the initial physician's perceived ability to oversee the obesity management of PwO. The ACTION-IO (Italy) and ACTION (Canadian) studies identified misperceptions and barriers to obesity referrals and obesity management [45–47]. The studies echoed the findings of a global study, which highlighted the mismatch in perceptions of obesity management between PwO and HCPs, with the authors concluding that there was a need for further education of PwO and HCPs in obesity management in general, in addition to evidence-based training to assist HCPs in their obesity management approach [45].

A strength of this study is that the DSP methodology is widely published and is validated and reflective of real-world clinical practice in the presenting population. Limitations include that this was a descriptive study that did not control for bias and confounding factors. The use of self-reported patient data is associated with the potential for recall bias, and due to the cross-sectional study design, no cause-and-effect relationships can be determined. Considering the relatively small sample size, results may not apply to the general population of PwO in the UAE. In addition, only 41 PCPs, diabetologists/endocrinologists, and obstetricians/gynecologists were included from the UAE. There was also a lack of inclusion of other physician specialties such as gastroenterologists and bariatric surgeons who are largely involved in obesity management through the prescribing of AOMs and may be actively treating obesity in clinical practice. Finally, the data were collected between April and August 2022, meaning the more recent changes to the AOM landscape in the UAE, with the approval of semaglutide and tirzepatide for weight loss, were not captured; thus, the current applicability of the data on medication use should be considered with this in mind.

5. Conclusion

PwO in the UAE have a high level of complications, and experience negative obesity-related impacts as measured by economic burden, including work productivity assessment, and reduced HRQoL. PwO ≥30

kg/m^2 seemed to have numerically lower scores than PwO 25–29.9 kg/m^2 in terms of HRQoL, and a numerically higher complication burden. Lack of treatment options at the time of data collection may be contributing to this impact. Considering the measurable negative impacts of obesity in this population, building on the existing obesity data in the UAE may lead to greater awareness and inform healthcare policies to improve future obesity management.

Acknowledgments

The authors would like to acknowledge Jane Snowball and Sheridan Henness PhD (Rx Communications, Mold, UK) for medical writing assistance with the preparation of this manuscript, funded by Eli Lilly and Company, and Acer Arana of Adelphi Real World for data quality checks.

Funding

This analysis was funded by Eli Lilly and Company. Data collection was undertaken by Adelphi Real World as part of an independent survey, entitled “The Adelphi Real World Obesity DSP.” Eli Lilly and Company did not influence the original survey through either contribution to the design of questionnaires or to data collection. The analysis described here used data from the Adelphi Real World Obesity DSP. The DSP is a wholly owned Adelphi product. Eli Lilly and Company is one of multiple subscribers to the DSP.

Data Availability

All data relevant to the analysis are included in the article. All data that support the findings of this survey are the intellectual property of Adelphi Real World. The data sets generated during and/or analyzed during the current study are available upon reasonable request to Victoria Higgins at Victoria.Higgins@adelphigroup.com.

Conflict of Interest

None.

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