Patient Preference and Adherence

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ORIGINAL RESEARCH

Real-World Off-Label Use of Semaglutide for Weight Reduction: User Behavior, Effectiveness, and Satisfaction

Ayman M Al-Qaaneh[1], Eyad A Qunaibi[2], Natalia A Al-Fraihat[3], Baraa E Abu-Aisheh[4], Sameh Rabea[5], Adnan A Al Aloul[6], Rajaa Matahen[7], Firas O Annabi[8]

[1]Faculty of Allied Medical Sciences, Al-Balqa Applied University (BAU), Al-Salt, 19117, Jordan; [2]Department of International Research, MedOne Academy, Amman, Jordan; [3]Regulatory Affairs Department, Maddox Pharma Swiss GmbH, Amman, 11953, Jordan; [4]Faculty of Medicine, Hashemite University (HU), Al-Zarqa, 13125, Jordan; [5]Department of Pharmaceutical Sciences, College of Pharmacy, Al-Maarefa University, Riyadh, 11597, Saudi Arabia; [6]Department of General Surgery, Biotera University, Bucharest, Romania; [7]Pharmaceutical Care Administration, King Abdullah Medical City, Makkah, 2789, Saudi Arabia; [8]Endocrine Division, Islamic Hospital, Amman, Jordan

Correspondence: Eyad A Qunaibi, Department of International Research, MedOne Academy, Amman, Jordan, Email eyadq@medone.academy

Background: Off-label use of semaglutide as Ozempic® for weight loss has surged in the Arab populations in the absence of structured real-world evaluation.

Objective: To assess utilization patterns, effectiveness, and patient satisfaction with off-label Ozempic use for weight reduction across Arab populations.

Methods: A cross-sectional survey was conducted using a validated bilingual questionnaire. Data included demographics, source of initiation, dose escalation, treatment duration, weight changes, and satisfaction. Analyses examined associations between demographics, treatment initiation source, dose escalation adherence, weight loss, and satisfaction.

Results: Analysis included 626 users. Nearly one-third of users (30.6%) self-initiated Ozempic, most based on independent self-learning and social media. Most (72.4%) used Ozempic solely for weight reduction, with a further 20.1% for both weight loss and diabetes control. About two thirds (69.3%) started at the recommended 0.25 mg dose, significantly more often in users with physician-led initiation ($p<0.05$). Only 20.3% followed standard dose escalation. Of those who stopped Ozempic, 59.7% discontinued the drug early before reaching 12 weeks of use including 4 weeks at the 1.0 mg dose. Among those who discontinued, treatment duration was longer in users with physician-led initiation. Despite erratic use, reported mean weight loss by 8–12 weeks exceeded 5% in most subgroups, with no statistically significant differences across 0.25, 0.5, and 1.0 mg doses. Satisfaction, reported by 56.5% of users, was positively correlated with weight loss and shifted into the positive satisfaction level at an estimated weight reduction of 11.6%.

Conclusion: Off-label Ozempic use in Arab populations is characterized by widespread self-initiation, irregular dosing, and early discontinuation. Nonetheless, clinically meaningful weight loss was achieved in many users. These findings emphasize the need for structured counseling to optimize outcomes.

Keywords: semaglutide, weight loss, body weight, real-world evidence, patient satisfaction

Introduction

Obesity has emerged as a major public health concern globally, including in the Middle East and North Africa (MENA) region.[1] A systematic review and meta-analysis of studies published between 2000 and 2020 reported that the prevalence of obesity and overweight among adults in MENA was 21.17% and 33.14%, respectively.[1] Excess body weight in the MENA region substantially increases the burden of cardiovascular diseases, type 2 diabetes, chronic kidney disease, and mortality.[2] In addition, self-medication is prevalent worldwide and poses significant public health risks, including adverse drug reactions, drug–drug interactions, improper dosing, exposure to substandard or fake products, and delayed seeking of proper help.[3] Arab countries are not an exception; during the COVID-19 pandemic, self-medication was common

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across Arab populations (overall 62.7%) and was associated with affordability/coverage barriers, reliance on advice from relatives and friends, and the easy accessibility of drugs.[4]

Semaglutide, a glucagon-like peptide-1 (GLP-1) receptor agonist, was initially approved under the brand name Ozempic® for type 2 diabetes to enhance glycemic control.[5] The marked weight loss induced by semaglutide in clinical trials sparked interest in its potential use for obesity management,[6,7] and it was subsequently developed and approved under the brand name Wegovy® for weight management among adults with obesity.[8] However, the availability of Wegovy remained limited until recently due to high demand and global supply shortages.[9] This, in addition to cost issues, has driven the off-label use of Ozempic for obesity in non-diabetic individuals across Arab populations, at doses lower than the approved 2.4 mg semaglutide in Wegovy. Moreover, social media further facilitates the spread of unverified information about Ozempic and significantly shapes public perceptions of Ozempic's effectiveness.[10,11] For example, celebrity endorsements, striking before-and-after weight-loss images, and influencer content on social media have amplified perceptions of Ozempic (semaglutide)'s dramatic effectiveness and encouraged its off-label use without medical guidance.[10,11] This raises concerns about the behavior of Ozempic off-label users and its efficacy for weight reduction outside of clinical trials, highlighting the need to close the gap between ideal and actual use.

Although widely used in some Middle Eastern countries,[12] few regional studies have evaluated the effectiveness of Ozempic for weight loss, all involving populations residing in Saudi Arabia[13–17] and primarily focusing on its impact on weight reduction and glycemic control. Given the high rate of self-medication in the Middle East,[18] it is essential to assess Ozempic utilization patterns (whether users obtain it by prescription, follow the recommended dose escalation, and the duration of use). Additionally, understanding user satisfaction with Ozempic for weight reduction is crucial, as it may offer insights into treatment adherence, real-world effectiveness, and barriers to long-term use.[19] Globally, however, research on patient satisfaction with Ozempic for weight loss remains limited.[20]

Given this context, this study investigates the real-world utilization patterns, effectiveness, and patient satisfaction associated with the off-label use of Ozempic for weight reduction. To the best of our knowledge, this is the first study to comprehensively explore these aspects across multiple Arab populations, and to include a subgroup of independently self-initiating users -a population largely uncaptured globally by randomized controlled trials or studies based on clinical or prescription data. The findings of this study provide valuable information that can guide healthcare professionals, policymakers, and the public toward more effective and better-informed obesity and overweight management.

Method

Study Design

This study was designed as a cross-sectional, observational investigation to evaluate real-world weight loss outcomes, user behavior, and satisfaction with Ozempic (semaglutide) among Arab populations. Data were collected via a structured questionnaire and included questions on demographics, user behavior, baseline weight, weight change at each dose level, and treatment satisfaction. The questionnaire was administered via Google Forms in either Arabic or English, depending on user preference. In addition to dissemination via social media, one endocrinologist -among several contacted- ultimately facilitated contact with his patients, who were then approached directly by the research team (responses were collected using the same standardized questionnaire and were analyzed uniformly across all respondents, regardless of recruitment source). To prevent duplicate responses, participants' Email addresses were recorded and duplicates removed. A full copy of the questionnaire in both languages is provided in [Supplementary Figure S1]. Follow-up calls were conducted 4–8 weeks after survey completion with participants who reported ongoing Ozempic use and had permitted follow-up contact, to obtain updated information.

Although some survey respondents reported using Ozempic for diabetes management -an approved indication for specific doses such as 1.0 mg- this study employs the term "off-label use" throughout because the 0.25–2.0 mg Ozempic doses are considered off-label from the perspective of weight reduction, the primary outcome of this study.

This survey and manuscript were developed as part of the "international research mentorship program: from idea to publication" on Med One Academy.

Questionnaire Validation

Face and content validation were performed by piloting the survey with 3 academicians who are experts in questionnaire-based research, 3 specialists in endocrinology and/or weight management, and 6 lay users. The questionnaire was revised based on feedback. Expert ratings of Simplicity, Relevance, Clarity, and Comprehensiveness were calculated, yielding values of 0.983, 0.988, 0.975, and 0.983, respectively, confirming the adequacy of the tool.

Participants

Inclusion Criteria

No age restriction was applied. Users who had used Ozempic (once-weekly injectable semaglutide, 0.25, 0.5, 1.0 or 2.0 mg) for either weight management and/or type 2 diabetes treatment were eligible to participate.

Exclusion Criteria

Individuals were excluded if they were using GLP-1 receptor agonists other than Ozempic at the time of participation. Participants with missing data at the start or end of any received dose were also excluded.

Sampling and Data Collection

A convenience sampling strategy was used and data collection occurred between December 2024 and January 2025.

User Behavior: The Questionnaire Assessed the Following Aspects of User Behavior

a. Source of initiation: Whether Ozempic use was based on physician prescription; if so, the physician's specialty was selected; if not, the source of advice was identified.
b. Starting dose
c. Dose escalation pattern: We asked about the duration spent on lower doses and progression to higher ones. Given that this study investigates off-label use of Ozempic, we applied a conventional operational definition for "following standard dose escalation". It was defined as using 0.25 mg weekly for 4 weeks, then 0.5 mg for 4 weeks, followed by 1.0 mg, regardless of the duration at the final dose. Accordingly, only users treated for ≥9 weeks were assessed. This definition reflects the early phase of Wegovy® recommended regimen, though not the full escalation to the 2.4 mg maintenance dose.[21]
d. Early discontinuation: defined as stopping Ozempic before completing 12 weeks of use, including at least 4 weeks at the 1.0 mg dose.
e. Total duration of Ozempic use.

Effectiveness of Ozempic in Weight Reduction

To evaluate the effect of different Ozempic doses on weight reduction -and given the variability in user behavior- several comparisons were conducted using the available weight reduction data:

a. Weight reduction was assessed at the end of each dose interval among a subgroup of users who followed the standard escalation up to 1.0 mg (4 weeks on 0.25 mg, then 4 weeks on 0.5 mg, followed by 4 weeks on 1.0 mg).
b. Cumulative weight reduction in this group was compared to that of users who remained on 0.25 mg.
c. It was also compared to users who received 0.5 mg -either throughout or after an initial period on 0.25 mg- for a total of 12 weeks.
d. Weight-reduction data were pooled across all users and stratified by Ozempic dose (0.25, 0.5, 1.0, 2.0 mg). For every dose–week cell with ≥ 3 observations, absolute weight change (kg) was plotted against treatment week without cohort stratification, and outlier values were excluded.

Satisfaction

Treatment satisfaction was assessed using a 5-point Likert scale (−2 = very unsatisfied to +2 = very satisfied) in response to the question: "Overall, are you satisfied with the drug's performance in reducing your weight?" Each respondent's

satisfaction score was paired with their corresponding % weight reduction. Data were analyzed using a plot of mean % weight reduction vs satisfaction score. A satisfaction score of +1 was used as the threshold for positive perception, as it is the lowest rating that explicitly reflects user satisfaction on the 5-point scale.

Ethical Approval and Informed Consent

This study obtained ethical approval from the Institutional Review Board (IRB) of AlMaarefa University, Riyadh, Saudi Arabia (Ref. No: IRB24-106). For the subset of participants recruited through the endocrinologist's clinic at the Islamic Hospital (Amman), local IRB approval was also obtained (Ref. 3347/2025/151). All procedures were conducted in accordance with the Declaration of Helsinki and local regulations. Participants were presented with an electronic informed consent form at the beginning of the questionnaire, outlining the study purpose, what data would be collected, and assuring confidentiality. Only those who consented were able to proceed to the survey questions. All collected data (both survey and chart) were kept confidential, stored on secure password-protected servers, and used only for research purposes. Access to identifiable information was limited to the research team members for follow-up purposes, and all analysis was done on de-identified datasets.

Statistical Analysis

Categorical variables (sex, diabetes status, standard dose escalation) were presented as absolute counts and percentages. Continuous variables (age, treatment duration, and weight change) were presented as mean ± standard deviation (SD) or median with interquartile range (IQR), depending on data distribution.

The primary outcome (percent weight loss from baseline) and satisfaction scores were summarized for the entire cohort and stratified by relevant subgroups. Differences in categorical variables (reason for initiation, prescribing physician, starting dose, dose titration status, early discontinuation, and country of residence) were assessed using the Chi-square test of independence or Fisher's exact test, as appropriate.

Differences in continuous variables across dichotomous outcomes (satisfaction score across sex, diabetes status, prescription status, starting at 0.25 mg, or following standard dose titration) were evaluated using the independent samples *t*-test for normally distributed data or the Wilcoxon rank-sum test (Mann–Whitney *U*-test) for non-parametric data. For comparisons involving more than two groups (satisfaction scores by age group, reason for use, country of residence, physician specialty, or total weight loss across countries or dose groups), one-way ANOVA was used for parametric data and the Kruskal–Wallis test for non-parametric data.

Correlation analyses were conducted to assess relationships between key variables (satisfaction level and initial weight, BMI, and cumulative weight reduction). Pearson's correlation coefficient (r) was used for normally distributed variables, and Spearman's rank correlation coefficient (ρ) for non-parametric analyses. Both the strength and statistical significance of correlations were reported.

Outliers due to data entry errors or with absolute Z-scores > 3 were excluded. All other values were retained to preserve the normal distribution. Sensitivity analyses were conducted without outliers to confirm that their inclusion did not alter statistical significance.

All tests were two-tailed with $p < 0.05$ considered statistically significant. No corrections for multiple comparisons were applied, as analyses were largely exploratory; however, key subgroup comparisons were limited to pre-specified variables to minimize type I error inflation.

All statistical analyses were performed using SPSS version 25.0 (IBM Corp., Armonk, NY, USA).

Results

Demographics

A total of 677 individuals participated in the survey. After excluding 51 respondents (46 due to missing end-of-dose weight data and 5 who were using non-semaglutide medications), the final analysis included 626 respondents. Of these, 55.1% were female and 31.0% had diabetes. The largest age group was 35–45 years old [Supplementary Figure S2]. The detailed distribution of participants by country is provided in [Supplementary Table S1]. In brief, Jordan accounted for

33.7%, Saudi Arabia 26.2%, Palestine 6.7%, Egypt 5.9%, and UAE 4.6% of the study population. A subset of 105 respondents was recruited through the outpatient endocrinology clinic of a specialist based in Jordan. Almost two-thirds of respondents (68.9%) did not have Ozempic covered by health insurance, whereas 10.8% had partial coverage and 20.3% had full coverage. At the time of stopping data collection, 387 (61.8%) participants had stopped using Ozempic whereas 239 (38.2%) were still actively taking it.

Utilization and Dosing Patterns

Most respondents (69.3%) reported taking Ozempic based on a doctor's prescription or advice, with the distribution of prescribing physicians shown in [Supplementary Figure S3]. The remaining 30.7% (n=192) self-initiated Ozempic without direct physician guidance. Among those, sources of advice to take Ozempic were own search or social media platforms, relative or friend, pharmacist, or Nutritionist (Figure 1). Respondents residing in Jordan had the highest reported rate of non-prescribed Ozempic use (36%) among the top five participating countries.

Reason for Using Ozempic

The primary reason for using Ozempic was weight management where 453 individuals (72.4%) reported taking it specifically for weight loss alone, and an additional 126 (20.1%) cited both weight loss and diabetes mellitus (DM) control as dual reasons. Only 47 (7.5%) of respondents used Ozempic exclusively for glycemic control in diabetes without a weight loss intent. The vast majority of respondents who received Ozempic for weight loss or weight loss and DM had a BMI $\geq$ 27 (93.4%) and $\geq$ 30 (83.4%) at the start of treatment.

Starting Dose

While 69.3% of respondents started Ozempic therapy at the recommended initial dose of 0.25 mg per week, the remainder started at higher weekly doses of 0.5 mg (n=114, 18.2%), 1.0 mg (n=75, 12.0%), or even 2.0 mg (n=3, 0.5%) [Supplementary Table S2]. Respondents who took Ozempic based on physician's prescription or advice were significantly more likely to start at 0.25 mg than those who began without a prescription (72.1% vs 39.3%, $\chi^2 = 5.18$, $p < 0.05$).

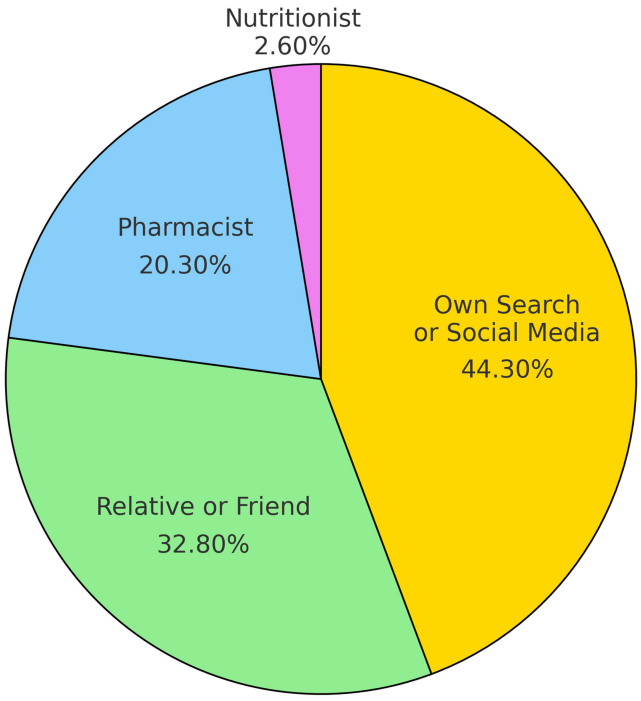

Figure 1 Sources of Advice for Ozempic Use Without Physician Guidance (n=192).

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Dose Escalation

Among respondents who discontinued Ozempic, only 72 (18.6%) adhered to the standard dose-escalation schedule; the rest escalated more rapidly, stayed longer on lower doses than recommended, skipped doses, or stopped taking the medication early. Overall, the total sample for dose escalation analysis comprised 568 respondents (181 ongoing users who had reached at least 9 weeks of therapy and 387 respondents who had discontinued treatment). Of these, 115 (20.3%) followed the recommended titration schedule.

Early Discontinuation

Early discontinuation, defined as stopping Ozempic before completing 12 weeks of use (including at least 4 weeks at the 1.0 mg dose), was assessed among those who had stopped the medication and was found in 231 out of 387 respondents (59.7%). Respondents who received Ozempic based on a physician's prescription or advice used the drug for a longer duration than those who did not (median 12 [8–20] weeks vs 8 [4–14] weeks, $p<0.001$). Among those who discontinued Ozempic (n = 387), 29.7% had used only a single strength prior to stopping, while the rest had used two (31.8%), three (33.6%), or all four strengths (4.9%). Respondents residing in UAE scored the highest rate of early discontinuation (85.0%), followed by Egypt (69.2%), Palestine (65.2%), and Jordan (56.3%), while respondents in Saudi had the lowest rate (49.4%) [$p<0.05$].

Weight Reduction

The mean baseline body weight of participants was 101.4 ± 22.2 kg, and the mean initial BMI was 35.7 ± 6.8 kg/m². The number of respondents who completed 4 weeks at each dose level (0.25→0.5→1.0 mg) and reported their weights at the end of each dose interval was found to be 30 respondents. This number started with 213 respondents who took 0.25 mg Ozempic for only 4 weeks, of whom 129 continued at 0.5 mg Ozempic for the next 4 weeks. Of these, 30 respondents only further escalated to 1.0 mg Ozempic for a final 4 weeks. The 12-week cumulative weight reduction in this standard-escalation group was compared against two other groups: those who remained on 0.25 mg for the entire 12 weeks (n = 17) and those who received 0.5 mg-either throughout or after an initial period on 0.25 mg- for a total of 12 weeks (n = 24).

In Table 1 and [Supplementary Figure S4] we show the average weight reduction in the standard-escalation group at the end of each dose interval, as well as the cumulative and percent weight reduction in this group in comparison with the groups that did not reach 1.0 mg dose. Although the differences did not reach statistical significance (presumably due to the small sample sizes), the group that escalated to 1.0 mg showed a trend toward greater cumulative weight loss than the groups that did not escalate to 1.0 mg. It is worth noting that no significant difference in percentage weight reduction was observed between diabetic and non-diabetic participants. In addition, there was no significant difference in percentage weight reduction between users who initiated Ozempic based on physician prescription/advice and those who self-initiated (p=0.860) [Supplementary Table S3].

As for pooled weight reduction data across all users (without cohort stratification), Figure 2 depicts Locally Estimated Scatterplot Smoothing (LOESS)-weight reduction curves for each weekly Ozempic dose (0.25 mg, 0.5 mg, 1.0 mg, and 2.0 mg). Each data point represents the mean net weight change after patients had been on the specified dose for the

Table 1 Average and Cumulative Weight Reduction (Kg) Over 12 weeks in Three Groups of Ozempic Users Based on Dose Escalation Pattern

Dose (n)	Weight Reduction (Kg)				% Wt. Reduction	P-value[a]
	Weeks 1–4	Weeks 5–8	Weeks 9–12	Cumulative		
Three doses with Standard escalation (30)	3.13 (±3.2)	2.98 (±3.1)	3.05 (±2.3)	9.17	8.85 (±6.62)	0.782
0.5 with or without 0.25 mg for 12 weeks (24)	NA	NA	NA	7.60	7.41 (±4.56)	
0.25 mg for 12 weeks (17)	NA	NA	NA	8.03	8.03 (±5.81)	

Notes: [a]Kruskal–Wallis test based on the % weight reduction.

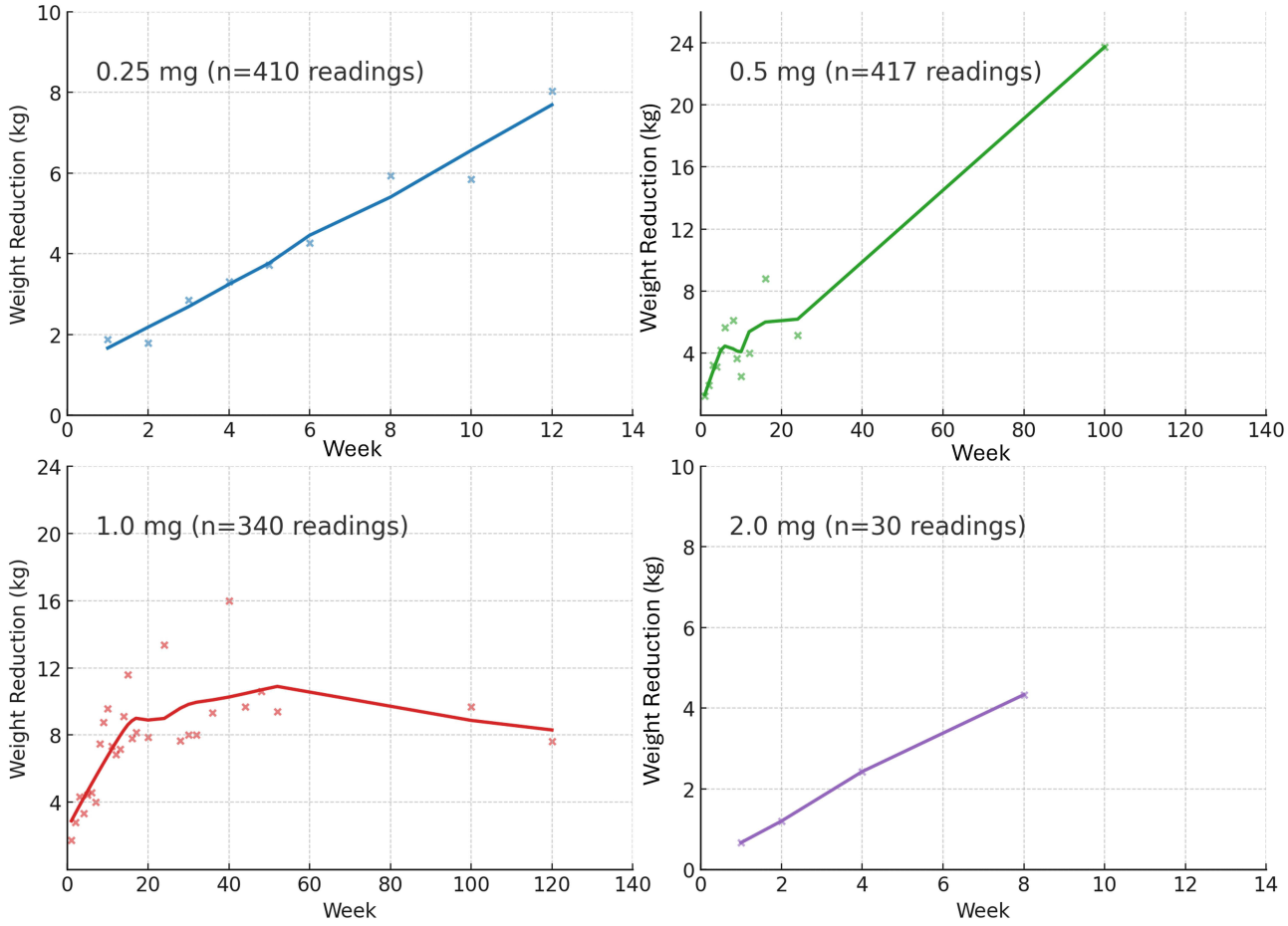

Figure 2 LOESS-smoothed weight reduction trajectories across four Ozempic doses (0.25 mg, 0.5 mg, 1.0 mg, and 2.0 mg).
Notes: *These curves reflect pooled averages at each dose–week combination, irrespective of whether participants initiated treatment at that dose or escalated to it; they are not intended to represent dose-escalation pathways or demographic subgroup trajectories. *Each panel displays mean body-weight reductions (kg) over time, derived from pooled patient-level observations. LOESS curves were fitted using a locally weighted regression (span = 0.75) for visualization of dose-specific trends. For clarity, error bars are omitted from the panels; means and corresponding standard error values at each dose -week point are provided in [Supplementary Table S4]. The number of readings used to construct each curve (n) is indicated within the respective panel and in supplementary [Supplementary Table S4].

indicated duration, regardless of whether they started at that dose or escalated to it; points are plotted only for dose–week combinations with at least three observations. The numerical mean and standard deviation for each dose-week point are provided in [Supplementary Table S4], and the number of observations (n) contributing to each curve is indicated on the Figure 2 and in [Supplementary Table S4].

In Table 2, the self-reported weight reduction achieved at each dose at weeks 4, 8, and 12 was extracted from [Supplementary Table S4] and presented as percent weight reduction. The 2.0 mg dose was excluded due to lack of data at week 12. There was no statistically significant difference in percent weight reduction across the three doses.

Table 2 Self-Reported % Weight Reduction Achieved at Each Dose at weeks 4, 8, and 12

Dose (mg)	**0.25**	**0.5**	**1.0**	**P-value**
Week	**%Weight Reduction (Kg) [Mean±SD]**			
4	3.27±3.28	3.14±2.64	3.35±2.59	0.466[a]
8	5.97±4.09	5.92±4.28	7.38±4.14	0.338[a]
12	7.93±5.73	4.24±3.79	6.65±4.71	0.158[b]

Notes: [a]Kruskal–Wallis test, [b]One-way Analysis of Variance (One-Way ANOVA).

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Data for the respondents who continued Ozempic for more than 12 weeks were available only for the 0.5 and 1.0 mg doses. The highest weight reduction values achieved at each were 23.75±14.10 (at week 100) and 16.00±11.11 kg (at week 40) for the 0.5 mg and 1.0 mg doses, respectively. This corresponds to 17.93 (±8.22%)% and 14.54 (±11.60)% weight reduction, respectively.

Satisfaction

In Figure 3, we present the distribution of responses to the question: "Overall, are you satisfied with the drug's performance in reducing your weight?"

On this five-point ordinal scale, the median satisfaction rating corresponded to the "satisfied" category. A total of 354 respondents (56.5%) reported being either very satisfied or satisfied, while the remaining 272 (43.5%) were either very unsatisfied, unsatisfied, or neutral/not sure regarding Ozempic weight loss effects.

The association between satisfaction and initial BMI approached statistical significance ($p = 0.057$). Among the 568 respondents for whom dose titration status could be determined (387 respondents who had discontinued treatment and 181 ongoing users who had reached at least 9 weeks of therapy), those who followed dose titration protocols reported significantly higher satisfaction levels compared to those who did not (Mann–Whitney $U = 22{,}494.5$, $Z = -2.331$, $p = 0.020$). Respondents who achieved higher cumulative weight reduction reported higher satisfaction with the drug ($p<0.001$).

Simple linear regression revealed a positive association between satisfaction score and percentage weight reduction (Figure 4). According to the fitted model, satisfaction shifted into the positive range -defined as a score of +1 on the ordinal scale- at an estimated weight reduction of 11.6%.

No meaningful association was observed between satisfaction and demographic factors (sex, $p=0.862$; age, $p=0.112$), diabetes status ($p=0.107$), or behavioral factors (prescription vs self-initiation, $p=0.404$; initiation with 0.25 mg vs higher doses, $p=0.536$).

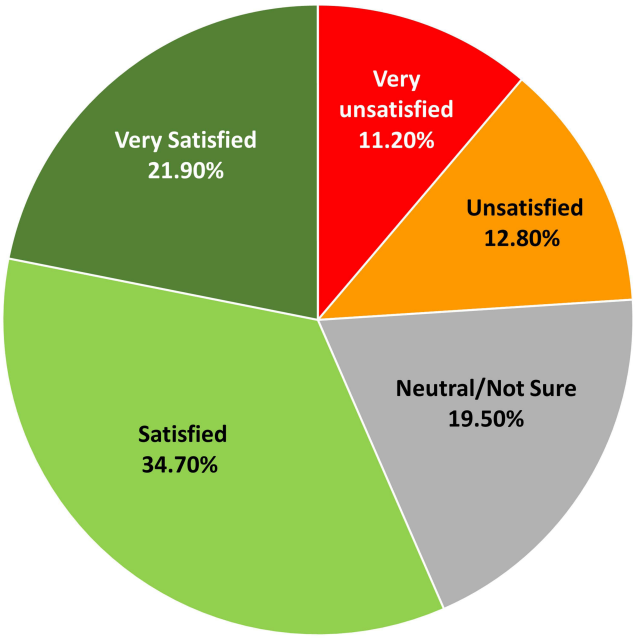

Figure 3 Distribution of satisfaction levels regarding Ozempic performance in weight reduction (n = 626).

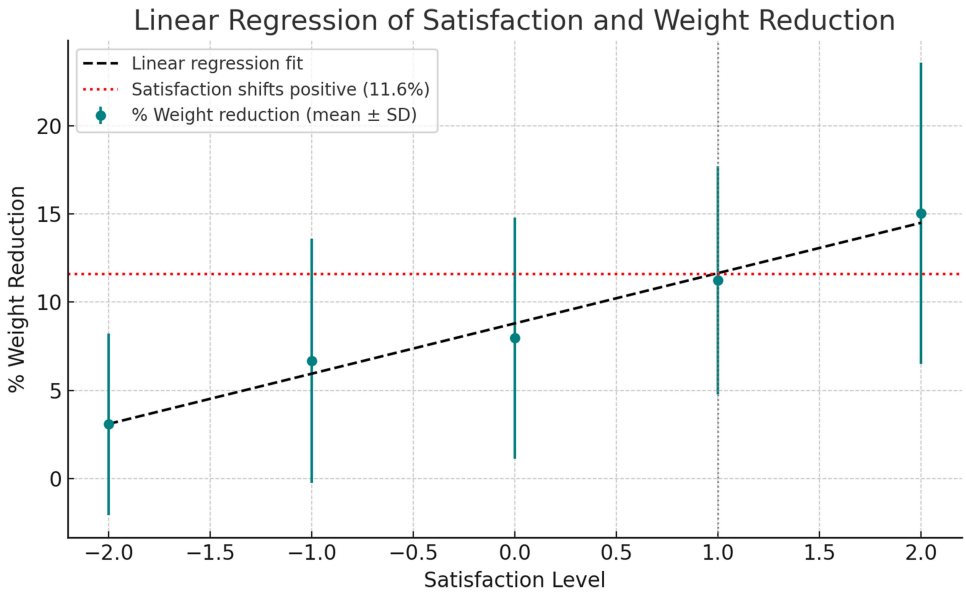

Figure 4 Association between satisfaction score and percentage weight reduction (n=626).

Discussion

This study is the first to provide a comprehensive real-world assessment of off-label Ozempic (semaglutide) use for weight management across Arab populations. Globally, it is also novel in integrating user behavior, effectiveness, and satisfaction within a single investigation. The findings reveal substantial variability in how Ozempic is used, with many users deviating from standard titration protocols and discontinuing treatment early. Despite this, meaningful weight loss was observed among those who continued the medication for at least 8–12 weeks, with mean reductions generally exceeding 5%. Respondents' satisfaction with Ozempic in weight reduction varied but overall was positive.

User Characteristics

The observation that most respondents in our study used Ozempic for weight reduction aligns with global trends, as semaglutide is increasingly sought for its weight-reducing effects even outside diabetes management settings.[22,23]

The largest proportion of participants fell in the 35–45 age range, younger than the cohorts in comparable studies from Denmark (median 49 years),[22] Florida (mean 50.4 ± 12.2 years),[23] and Saudi Arabia (median 57 years).[13] This age discrepancy may reflect the survey-based nature of our study, as younger adults might be more responsive to digital data collection methods, on contrast to the medical records or claim-based designs used in the other studies.

The baseline BMI of our cohort (35.7 ± 6.8 kg/m²) closely matched those reported in a Danish study (median 36, IQR: 32–40)[22] and a Saudi study (~34).[13] Moreover, the vast majority of respondents (83.4%) had a baseline BMI ≥ 30, suggesting that semaglutide was predominantly used for overweight, obesity, or diabetes-related weight concerns rather than for cosmetic weight loss (eg, pursuit of an "Instagram body").[24]

The majority of respondents were female (55.1%), similar to a Saudi study (60.3%[13]) but lower than reported in other cohorts from Denmark (70%;[22] 78%[25]) and the United States (81%[26]).

User Behavior

Prescription vs Self-Initiation

Roughly one-third of users initiated Ozempic without a physician's prescription or advice. Independent self-learning or social media were the most frequently cited motivators, followed by advice from relatives or friends, pharmacists, and nutritionists. Since 16.8% of respondents were recruited through an endocrinologist's clinic, the true rate of self-initiated use in the broader population may be even higher. This behavior mirrors global patterns of self-medication; for example, a Danish survey of 559 Wegovy users reported that 70% requested the drug from their general practitioners,[22] indicating

strong user-driven demand even when a prescription was required. Thus, even among those who obtained Ozempic via physician guidance in our study, prior influence from non-medical sources cannot be excluded.

Prescriber Specialty

In our study, most Ozempic prescriptions were written by endocrinologists/diabetologists, followed by internal medicine physicians and general practitioners. In contrast, data from a large Danish cohort showed that general practitioners initiated 86% of semaglutide prescriptions for weight management,[25] likely reflecting the fact that semaglutide is a prescription-only medication in Denmark.[27]

Dose Titration

Only 20.3% of respondents in our cohort followed the standard dose escalation regimen for off-label use (0.25→0.5→1.0 mg), which corresponds to the early phase of the full Wegovy® titration schedule that extends up to 2.4 mg. Deviations included rapid dose escalation, prolonged use of lower doses, or erratic dosing schedules. Similarly, in the large nationwide Danish cohort study of semaglutide users, only 10% adhered to the recommended titration up to 2.4 mg, while 33–48% remained on 1.0 mg.[25] These patterns likely reflect real-world challenges such as cost, tolerability issues, supply limitations, or satisfaction with lower doses. Starting at higher doses may increase the risk of adverse effects and reduce adherence to the drug, and erratic or suboptimal dosing may compromise effectiveness.

Early Discontinuation

Early discontinuation (stopping before 12 weeks of therapy, including at least 4 weeks at 1.0 mg) was observed in 59.7% of respondents. Additionally, 21.1% of participants reported using semaglutide for more than 6 months. By contrast, a Saudi clinic review of 1,007 patients on 1 mg semaglutide found that only 44% remained on therapy after 6 months.[13] While high discontinuation rates are reported globally, our rate and that in the Saudi study are even higher, suggesting more erratic use of Ozempic among Arab populations. For context, in a US electronic health record analysis of new GLP-1 RA users, 46.5% (with type 2 diabetes) and 64.8% (without diabetes) discontinued semaglutide within one year.[28] Similarly, a US pharmacy claims study of insured obese patients without diabetes found only 47.1% persisted with semaglutide at 1 year.[26] Notably, this occurred despite all patients having insurance (and thus lower cost barriers). In that study, the median time to discontinuation was ~40 weeks, whereas in our survey the median time to discontinuation was 12 [6–17] weeks.

Notably, among our respondents, discontinuation rates were lower among those who initiated Ozempic with physician's prescription or advice. Supervised care often includes nutritional counseling, side-effect management, and realistic goal-setting, which may improve persistence. A real-world service evaluation in the UK, where semaglutide was paired with a remotely delivered weight-management program, found this approach to be effective, feasible, and acceptable for self-paying adults with obesity.[29] Similar support programs could be helpful in the MENA region, especially for self-paying users concerned about affordability. In addition, since social media plays a major role in shaping perceptions of Ozempic, including the spread of information and misinformation,[10] proactive correction through targeted educational campaigns on these platforms could help counter misinformation and promote safe and effective use.

Weight Reduction

Clinical benefits of weight loss generally begin at around a 5% reduction in body weight.[30] This benchmark was achieved in the STEP 2 trial, where 1.0 mg semaglutide led to ~7% weight loss over 68 weeks.[31] However, real-world outcomes with submaximal semaglutide doses have been highly variable across studies.

In our study, despite the short duration and suboptimal dose escalation, clinically meaningful weight loss was reported by 8–12 weeks, even at the lowest dose (0.25 mg). For context, a Saudi retrospective review of 1,223 diabetic patients, the majority of whom were maintained on 1.0 mg semaglutide, reported mean weight reductions of ~13% at 6 months and ~19.5% at 12 months.[17] In another small study of 80 Ozempic users who were started at 0.25 mg and, where appropriate, escalated to and were maintained on 0.5 mg, the reported 12-week weight loss was 6.4 ± 4.2%.[29]

By contrast, other regional and global studies using ≤1.0 mg semaglutide have reported more modest outcomes. For example, in one Saudi retrospective study, weight loss was documented for 955 and 442 patients achieving 1.0 mg

treatment with the medication for at least 3 and 6 months, respectively. Among those with diabetes, percent weight reductions were 3.3% and 4.4%, while nondiabetic patients lost 2.2% and 3.3% over the same durations.[13] Similarly, in a cohort of 116 patients residing in Saudi Arabia who initiated semaglutide at 0.25 mg and escalated to 0.5 mg, mean 12-month weight loss ranged from just 0.42 to 1.16 kg.[14] In a US cohort including 3,389 semaglutide users, mean weight loss at 1 year with low maintenance dosages (≤1.0 mg) was 3.5% ±7.1%, compared to 6.6% ±9.1% with high doses (1.7–2.4 mg).[23] However, a major limitation was that this analysis pooled patients regardless of treatment persistence (ie, continuous use without ≥90-day gaps), and did not stratify weight outcomes by both dose and persistence.

One interesting observation in our study is the absence of statistical significance in weight reduction across the 0.25 mg, 0.5 mg, and 1.0 mg dose groups. Likewise, the difference in weight reduction between those who followed standard dose escalation up to 1.0 mg and those who remained on 0.25 and 0.5 mg was small and did not achieve statistical significance. This mirrors a Saudi study of 363 patients with type 2 diabetes, which found no significant difference in weight loss between 0.5 mg and 1.0 mg doses (−6.1 kg vs −6.2 kg over ≥12 months; $p = 0.837$).[15] These findings question the assumption that higher doses invariably produce greater weight loss in heterogeneous real-world populations.

Satisfaction

Our study is among the first to quantify real-world patient satisfaction with off-label Ozempic in the context of weight management. Just over half of respondents (56.5%) reported satisfaction, while the remainder were either dissatisfied or neutral. This distribution reflects diverse personal outcomes and expectations in uncontrolled settings. A cohort study from Pakistan reported a higher satisfaction rate of 72.3% among 112 diabetic patients who used semaglutide for at least 3 months.[32] In our analysis, achieving a weight reduction of ~11.6% was the threshold most strongly associated with a positive satisfaction score, which can inform patient counseling. Satisfaction was positively correlated with the degree of weight reduction and with adherence to dose titration, and it was not significantly influenced by demographics or diabetes status. Overall, these results suggest that perceived efficacy is the primary determinant of satisfaction.

Limitations

The use of self-reported data in this study introduces the potential for recall bias. Additionally, no control was applied for concurrent use of other weight-affecting medications. One specific limitation is that 105 participants were recruited through a single endocrinology clinic in Jordan, which may have inflated the proportion of prescription-based users and the relative representation of endocrinologists among prescribing physicians. This approach, however, was necessary to secure participants in a real-world setting where voluntary physician cooperation is often limited. The use of convenience sampling may introduce selection bias; however, this approach was essential to capture a novel subgroup -self-initiators of Ozempic- who are typically absent from clinic- or registry-based research. Finally, pooled dose-specific weight loss data did not distinguish between users who initiated treatment at a given dose and those who escalated to it from lower doses. However, given the variability in escalation patterns and limited subgroup sizes, further stratification would have compromised statistical robustness.

Conclusion

This study, based on a large and diverse sample from multiple Arab countries, shows that off-label Ozempic use in this cohort was characterized by high rates of self-initiation, irregular dosing patterns, and early discontinuation. Despite these suboptimal behaviors, average weight loss by 8–12 weeks exceeded the 5% threshold typically considered clinically meaningful, and over half of users expressed satisfaction with the drug's performance. Notably, adherence to standard titration was uncommon and did not significantly enhance outcomes, challenging assumptions derived from clinical trial protocols. These findings point-to the importance of real-world evidence in informing weight management strategies and highlight the need for structured support systems to optimize persistence and outcomes among off-label users. In addition, they can inform future comparative and longitudinal studies in diverse settings.

Implications and Future Research

The implications of this study for practice are substantial; clinicians should be aware that many users access Ozempic at off-label doses influenced by non-medical external influences and may use it without appropriate supervision. Educational campaigns -especially via social media- are needed to address erratic dosing patterns and help set realistic expectations. Subtherapeutic use may still yield clinically relevant weight loss, bridging the gap between cost and efficacy. Yet, larger-scale, longer-duration studies are required to confirm the magnitude and durability of these effects as well as satisfaction. Moreover, comparative research between semaglutide and newer agents such as tirzepatide in Arab populations is warranted.

Data Sharing Statement

The data supporting the findings of this study are available within the article and its supplementary materials.

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Disclosure

The authors declare that they have no conflicts of interest in this work.

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