Research Article

Impact of social media on the use of weight loss medications

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Abstract

Introduction: The prevalence of obesity is increasing worldwide, presenting a significant public health concern. Weight loss medications can assist individuals in managing obesity, especially those who struggle to lose weight through lifestyle changes alone. However, the use of social media for health information purposes is also on the rise, presenting both opportunities and challenges. This study aimed to explore the impact of social media on the use of weight loss medications in Saudi Arabia.

Methods: A cross-sectional survey was conducted among social media users aged 18 years and older. The survey collected data on demographic characteristics, social media usage for weight loss, attitudes towards weight loss medications, and personal experiences with these medications.

Results: The study included 295 social media users, with a slightly higher proportion of female participants and middle-aged individuals. Over 62.9% of participants reported using social media for more than three hours daily, and 42.4% searched for weight loss medications on social media platforms. Among participants who had used weight loss medications, 39% did so without a medical prescription, obtaining the medication through pharmacies or relatives/friends. The main motivation for using weight loss medications was the desire to lose weight, and a significant percentage of participants experienced adverse events from using weight loss medications.

Discussion: This study highlights the potential influence of social media on users' health-related decisions, including the use of weight loss medications. However, the high prevalence of self-medication among participants raises significant public health concerns. It is crucial to implement more control on the dispensing of weight loss medications to ensure their safe and appropriate use. Healthcare providers should play a more active role in guiding and supporting their patients in making informed decisions about weight management strategies.

Conclusion: This study provides valuable insights into the impact of social media on weight loss medication use in Saudi Arabia. The findings emphasize the need for accurate and evidence-based health information on social media platforms and the promotion of responsible medication use. Furthermore, this study highlights the importance of addressing the issue of self-medication and the need for proper medical supervision when using weight loss medications. Healthcare providers and public health policymakers should engage with social media users to promote safe and effective weight management strategies.

Keywords: Obesity; Weight loss; GLP-1 agonist; Social media; Metabolism

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Introduction

Obesity, a chronic metabolic disorder, is marked by an increase in fat deposits, in either quantity or size.[1] It adversely affects nearly all physiological functions of the human body and presents a significant public health issue.[2] The World Health Organization (WHO) classifies adults with a BMI of 25 or greater as overweight, and those with a BMI of 30 or greater as obese.[3] Between 1980 and 2015, the global proportion of individuals with a BMI of ≥ 25 kg/m^2 increased from 25.4% to 38.5% in men and 27.8% to 39.4% in women.[2] In Saudi Arabia, it is estimated that 57.5% of men and 61.5% of women have a BMI of ≥ 25 kg/m^2.[4]

Therapeutic strategies for obesity aim to not only reduce weight but also prevent weight regain, enhance body composition, manage comorbidities, minimize health risks, and improve life quality.[1] Pharmacotherapies are often used in conjunction with lifestyle interventions, especially for individuals who struggle to lose weight through lifestyle changes alone, and can assist in maintaining weight loss.[5] In KSA, liraglutide 3.0 mg, a naltrexone/bupropion combination tablet, and orlistat are three approved medications for long-term obesity management alongside health behavior modifications.[6] Nonetheless, the off-label use of drugs such as semaglutide, dulaglutide, and tirzepatide, as well as various supplements, can also be used for weight loss.

Use of the internet for health information purposes is increasing, and social media provides an efficient platform for users, patients, and their families to access information, seek and offer advice, and share experiences within the community.[7] Although social media has the potential to connect adults with obesity to information, social support, and evidence-based lifestyle interventions, it also presents challenges.[8] This study aims to explore the impact of social media on the use of weight loss medications, including the

prevalence of social media use for weight loss advice and the perceived influence of social media on the utilization of weight loss medications without a prescription in Saudi Arabia.

Materials and Methods

Study design

A cross-sectional survey was carried out among adults aged 18 years and older who use social media. Participants were recruited *via* personal contact phone numbers within Saudi Arabia through social media platforms and asked to complete an online survey. The survey gathered data on demographic characteristics, social media usage for weight loss, its impact, and attitudes towards using weight loss medications with or without a prescription, as well as personal experiences with these medications.

Study period

The study began with a preparatory period (4 weeks), during which the research objectives were defined, the literature was reviewed, and questionnaire items were developed. The questionnaire's reliability and validity were assessed after piloting with a sample group. This was followed by a fieldwork period (8 weeks), during which data were collected and analyzed and the report was written (8 weeks).

Sample size

The sample size calculated using the formula for one sample proportion estimation for equivalence estimation from previous studies reported to be 43.1% With type one error of 5% and power of the study of 80% and margin of error of 10% and equivalence margin of 0%, the estimated sample size is 260 participants in addition to drop out of the study, the sample size increased by 10% to be around 283 participants.

Data collection tool

An Arabic questionnaire, created by the researcher, was used to gather the required information.

Data collection technique

The researcher distributed the survey using a self-administered Google Form. Data were reviewed and automatically transferred to a personal computer.

Data entry and analysis

Data were organized into a datasheet in Microsoft Excel, descriptive statistics were used and data were primarily analyzed by the number and percentage of each survey choice.

Ethical considerations

Ethical approval was obtained from the bioethics committee for scientific and medical research at the University of Jeddah. Consent to participate in the study was indicated by completing the questionnaire, as mentioned on its front page. All information was kept confidential and accessed only for scientific research purposes.

Results

In the study design, 295 social media users were interviewed.

Study group features

There was a slightly higher proportion of female participants, 59.9% compared to 41% males, with the majority (32.9%) belonging to the 35-44 years age group, and 30.9% belonging to the 45-54 years age group. In terms of education, 97.4% of participants had at least a high school diploma, with the largest portion, 49.3%, holding a bachelor's degree. A total of 69.9% of participants had a BMI exceeding 25 kg/m^2, including 81.9% of females and 61.5% of males. While 61.2% of participants reported no known chronic illnesses, less than 40% indicated they had one or more chronic conditions, most commonly diabetes at 19.7%, and hypertension at 14.5%.

Social media usage

Over 62.9% of participants reported using social media for more than 3 hours daily, while 30.5% used it for less than 3 hours each day. WhatsApp was the most popular platform at 86.8%, followed by Snapchat at 70.9%, Instagram at 52.3%, and TikTok at 48.3%. A total of 42.4% of participants searched for weight loss medications on social media platforms. When asked if social media influenced their decision on using weight loss medications, 28.5% said it had a positive or negative impact, 21.9% were unsure, and 49.7% did not believe social media affected their decision. Regarding the usefulness of information on weight loss medications on social media, 19.9% of participants found it unhelpful, 38.4% found it helpful, and 41.7% were uncertain.

Weight loss medication usage

A total of 57% of participants had never discussed weight loss medications with a healthcare provider, while 39.1% had. Among them, 39.1% had used weight loss medications, with 21.9% having used it in the past and 17.2% using it currently. The most commonly used medications were the semaglutide injection Ozempic® at 45.8%, the li-

raglutide injection Saxenda® at 20.3%, and Metformin at 16.9%. Of those who used weight loss medications, 39% did so without a medical prescription (Figure 1). Among non-prescription users, 60.9% obtained the medication through a pharmacy and 30.4% through a relative or friend. Of those who did not consult a healthcare provider, 52% believed it was unnecessary, 30.5% could not access a healthcare provider, and 17.4% feared their healthcare provider would refuse to prescribe the medication.

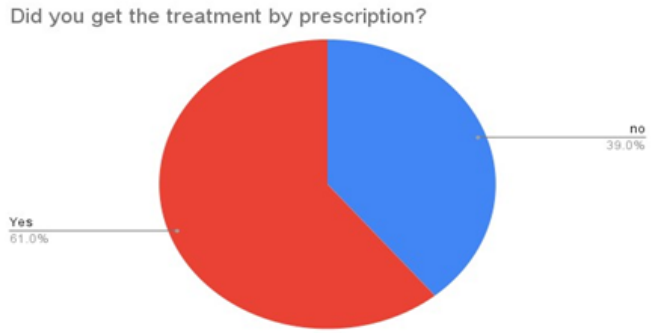

Figure 1: *Weight loss medications with a medical prescription.*

The main motivation for using weight loss medications was a desire to lose weight at 89.8%, followed by physician recommendations at 22%, and recommendations from relatives or friends at 15.3%. Among users, 28.8% had used weight loss medications for over a year, 15.3% for 6 to 12 months, and 1.9% for less than a month. Of those who had used weight loss medications, 64.4% recommended their use to others, 16.9% did not, and 18.6% were unsure (Figure 2).

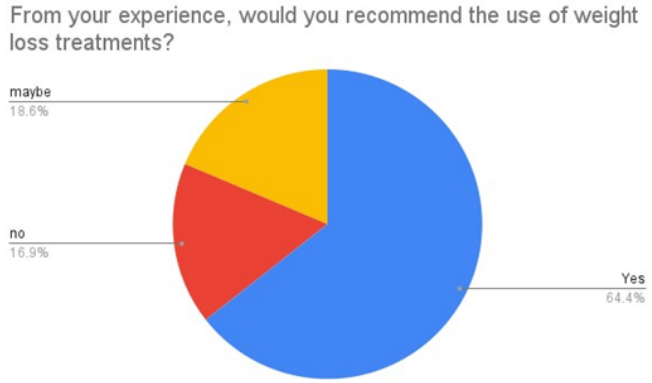

Figure 2: *Recommendation of weight loss medications to other.*

About 50.8% of participants experienced adverse events from using weight loss medications, with the most common being nausea at 60.3%, fatigue at 43.3%, gastroesophageal reflux at 36.7%, and constipation at 40%.

Discussion

The results of this study provide valuable insights into the influence of social media on the decision-making processes and behaviors related to weight loss medications among users. With a diverse group of participants representing various age groups, genders, educational backgrounds, and health conditions, the study highlights some key findings that have implications for healthcare providers and public health policymakers. The slightly higher proportion of female participants (59.9%) and middle-aged individual (35-54 years) age groups, suggests that weight management could be a significant concern within this population, and indicates that this demographic may be more inclined to engage in weight loss efforts and seek related information. A notable finding was the high prevalence of being overweight and obese among participants, with 69.9% having a BMI exceeding 25 kg/m^2. This is a significant public health concern, given the established relationship between obesity and chronic health conditions, such as diabetes and hyper-tension, which were also commonly reported in this study. The high prevalence of obesity could be a driving factor for the interest in weight loss medications observed among participants. The high educational attainment among participants (97.4% with at least a high school diploma) suggests that the study population is well-educated, which may influence their decisions regarding weight loss medications. There was extensive use of social media by participants, with 62.9% reporting the use of social media for more than 3 hours daily. This high level of exposure may reveal the potential influence of social media on users' health-related decisions. The high usage rates of platforms such as WhatsApp (86.8%), Snapchat (70.9%), Instagram (52.3%), and TikTok (48.3%) indicate that these platforms could be important sources of information and support for weight loss efforts. It is noteworthy that 42.4% of participants searched for weight loss medications on social media platforms, and 28.5% admitted that social media influenced their decision regarding weight loss medication usage. These findings demonstrate the growing impact of social media on health-related decision-making and the need for healthcare providers and public health authorities to engage with social media users to provide accurate, evidence-based information on weight loss medications and to counter-act misinformation. The fact that 57% of participants had never discussed weight loss medications with a healthcare provider, and that 39% of those who used such medications did so without a prescription by obtaining the medication through pharmacies or relatives/friends, indicates a trend which raises significant public health concerns, as self-medication can lead to medication misuse, adverse events, and a lack of professional guidance on appropriate weight loss strategies. Therefore, it is crucial to implement more control on the dispensing of weight loss medications to ensure their safe and appropriate use. This can be achieved through strengthening regulations on the

sale and distribution of weight loss medications, increasing public awareness of the potential risks and benefits of these medications, and promoting responsible medication use. Furthermore, healthcare providers should play a more active role in guiding and supporting their patients in making informed decisions about weight management strategies and monitoring the use of weight loss medications. The main motivation for using weight loss medications was the desire to lose weight (89.8%), with a smaller percentage of participants being influenced by physician recommendations (22%) and recommendations from relatives or friends (15.3%). This emphasizes the importance of addressing patients' weight loss desires and ensuring that healthcare providers guide and support their patients in making informed decisions about weight management strategies. The duration of medication use varied, with a considerable proportion of users taking them for more than a year. This highlights the need for further research on the long-term effects and safety of weight loss medications. The fact that a significant percentage of participants experienced adverse events from using weight loss medications, such as nausea, fatigue, gastroesophageal reflux, and constipation, further emphasizes the importance of professional supervision and proper patient education. Furthermore, the high percentage of participants recommending the use of weight loss medications to others suggests that users may not be fully aware of the potential risks and adverse events associated with these medications. It is crucial to promote responsible medication use and improve the quality of health information on social media platforms to minimize potential risks and maximize the benefits of weight loss medications for those who need them.

While this study provides valuable insights into the impact of social media on the use of weight loss medications in Saudi Arabia, it also has several weaknesses that need to be addressed. Firstly, the study relied on self-reported data, which can be subject to bias and may not accurately reflect the participants' actual behaviors or experiences. Secondly, the study was limited to social media users who had access to and were willing to complete an online survey, which may not represent the general population or those who do not use social media. This limits the generalizability of the study's findings to the broader population in Saudi Arabia. Overall, while the study provides important insights into the impact of social media on weight loss medication use in Saudi Arabia, these weaknesses should be addressed in future research to enhance the study's validity and reliability.

Conclusion

This study provides valuable insights into the role of social media in shaping individuals' decisions and behaviors related to weight loss medications. The findings highlight the need for healthcare providers and public health policymakers to engage with social media users, providing accurate information and promoting safe and effective weight management strategies. Furthermore, the study emphasizes the importance of addressing the issue of self-medication and the need for proper medical supervision when using weight loss medications.

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None

Conflict of Interest

The author has nothing to disclose and also state no conflict of interest in the submission of this manuscript.

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