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Research Article

A corpus-assisted multimodal discourse analysis of glucagon-like peptide-1 receptor agonist narratives on TikTok

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ABSTRACT

This study investigates how glucagon-like peptide-1 receptor agonists (GLP-1 RAs) are discursively constructed on TikTok through a corpus-assisted multimodal discourse analysis of 100 English-language videos tagged #glp1, comprising 137,032 words of transcribed speech and 254 minutes of content. Integrating keyword and collocation analysis, stance evaluation, MIPVU-based metaphor identification, and systematic multimodal annotation, the study examines dominant linguistic patterns, evaluative strategies, and semiotic resources shaping GLP-1 RA narratives. Results suggest a predominantly weight-normative and biomedical framing, with positive stance appearing prevalent across both verbal and non-verbal modes. Metaphorical framing appeared to center on four recurrent domains: transformation, struggle/battle, journey/progress, and cravings as noise, potentially reinforcing pharmacological intervention as simultaneously medical and personal. Multimodal features largely appeared to align with evaluative stance across semiotic layers, though descriptive patterns tentatively suggest variation by creator type. The study points to how TikTok's communicative affordances may shape public understandings of pharmaceutical intervention, potentially privileging emotionally resonant narratives over clinically balanced discourse. It contributes to multimodal communication research by offering indicative evidence of how platform-specific semiotic resources may collaboratively shape health-related meaning-making, with possible implications for applied linguistics and digital health communication.

Keywords: Multimodal discourse analysis, corpus-assisted discourse analysis, TikTok, GLP-1 RA

INTRODUCTION

Originally developed for the treatment of type 2 diabetes mellitus (T2DM), glucagon-like peptide-1 receptor agonists (GLP-1 RAs) mimic the incretin hormone GLP-1 to regulate glycemic control (Mozaffarian, 2024). Their mechanisms include stimulating glucose-dependent insulin secretion, inhibiting glucagon release, and slowing gastric emptying. These same mechanisms also induce satiety and reduce caloric intake, leading to weight loss. The latter effect, initially a secondary outcome in T2DM trials, has prompted the approval of higher-dose formulations (e.g., liraglutide and semaglutide) for obesity management. More recently, tirzepatide, a dual GLP-1 and GIP receptor agonist, has demonstrated enhanced efficacy in weight reduction, likely due to the synergistic interaction of both hormonal pathways (Nogueiras et al., 2023).

The popularization of GLP-1 RA agents for weight loss has transcended clinical settings and entered the realm of digital culture, particularly on TikTok. With over 1.5 billion monthly active users and average daily engagement exceeding 90 minutes, TikTok is not only a social media platform but a powerful site of cultural production (Pearson et al., 2025; Wall Street Journal, 2021). The hashtag #glp1 has garnered hundreds of millions of views, reflecting widespread interest. Here, influencers and everyday users share videos

celebrating GLP-1 RAs' dramatic effects on body transformation, often framed through personal narratives, humor, and visual storytelling (Basch et al., 2023).

However, this participatory discourse also prompts important considerations. It intersects with broader sociocultural dynamics including weight stigma, the medicalization of fatness (Goldberg, 2014), and unequal access to healthcare. Qualitative content analyses suggest that TikTok's dominant weight-loss narratives promote weight-normative ideals, equating thinness with health (Minadeo & Pope, 2022). TikTok content frequently presents GLP-1 RAs as transformative, which may unintentionally suggest that higher-weight bodies require pharmacological intervention. Framed in a medical context, these depictions run the risk of reinforcing existing social attitudes toward weight.

According to Lennon (2023), TikTok creators frequently frame obesity as a chronic illness, aligning with established medical consensus. This biomedical framing is used to justify the use of injectable therapies for weight management, presenting them as necessary medical treatments. In doing so, the discourse implies that weight loss can be achieved pharmacologically, potentially bypassing the need for sustained lifestyle changes or engagement in healthy behaviors. While it departs from traditional diet talk, it ultimately maintains similar assumptions about body regulation, now reframed through the authority of medicine rather than holistic health practices.

This cultural momentum has public health consequences. Social media-fueled demand has contributed to GLP-1 RA shortages, limiting availability for diabetic patients (Basch et al., 2023). At the same time, media hype can reinforce a pharmaceutical model of weight management that may overshadow the importance of sustained preventive and behavioral interventions. This framing risks conveying the misleading notion that pharmacological solutions can substitute for health-promoting behaviors, despite clinical evidence that such behaviors remain essential even when medication is prescribed, potentially deepening existing healthcare disparities (Chakhtoura et al., 2023). Raubenheimer et al. (2024) warn that the accessibility of these medications may increasingly reflect socioeconomic divides, privileging affluent users in managing weight-related health concerns.

Despite growing scholarly attention to GLP-1 RA's media portrayal, most studies have relied on descriptive categorization. For instance, Basch et al. (2023) coded video content based on surface-level themes (e.g., side effects and off-label use), while Lennon (2023) provided qualitative insight into how users differentiate between traditional dieting and GLP-1 usage. Yet there remains limited research on the discursive construction of GLP-1 RAs across a larger, multimodal dataset. Given that TikTok videos convey meaning through the interplay of spoken language, visual imagery, gestures, and sound, a multimodal analytic framework may help to uncover how these semiotic modes interact to construct meaning, in an area that remains underexplored in the current literature (Kress & van Leeuwen, 2006; Machin & Mayr, 2023).

Corpus-assisted multimodal discourse analysis (CAMDA) offers a suitable framework for examining TikTok content by combining the strengths of corpus linguistics and multimodal discourse analysis (Bednarek, 2015; Zhang & Cheung, 2022). This approach integrates verbal, visual, and embodied modes to explore how meaning is constructed across digital platforms (Kress & van Leeuwen, 2006; Machin & Mayr, 2023). Grounded in critical discourse analysis (Chouliaraki & Fairclough, 2010; Wodak, 2015) and supported by corpus techniques to identify recurring lexical and evaluative patterns (Baker et al., 2008; Partington et al., 2013), CAMDA enables both qualitative interpretation and frequency-based insights into discourse patterns.

This study applies a CAMDA approach to investigate how GLP-1 RAs are framed on TikTok. Specifically, it examines:

(1) dominant linguistic patterns and stance-taking strategies in GLP-1 RA-related content (Du Bois, 2007),

(2) multimodal features, such as gestures, body imagery, music, and on-screen text, used to convey meaning, and

(3) how GLP-1 RA-related TikTok discourses reproduce or challenge broader social narratives surrounding weight, health, and pharmaceutical authority.

In doing so, the study contributes to critical public health communication research by exploring how digital participatory media shape contemporary understandings of the body and medical intervention.

METHODS

The analytic procedure is organized into four stages: sampling and corpus construction, data retrieval and transcription, multimodal annotation, and integrated corpus-assisted analysis, which are described below.

Corpus Construction and Data Collection

This study is based on a custom-built corpus of TikTok videos that explicitly focus on GLP-1 RA medications in the context of weight loss. Data were collected from TikTok through institutional access to TikTok research tools (Project ID: 1723718073).

Video retrieval was conducted within TikTok's search interface using the hashtag #glp1 as the primary search query, while branded drug names were intentionally excluded to avoid trademark complications and ensure non-commercial scope. The hashtag #glp1ra was not included because it represents a more technical and less commonly user-facing label on TikTok.

Retrieval was carried out through the top results tab, which displays videos ranked by TikTok's recommendation system according to factors such as relevance to the query, recency, and engagement signals. In this study, algorithmic recommendation and circulation were treated as contextual conditions shaping discourse visibility rather than as variables measured directly. To minimize algorithmic personalization during data collection, searches were conducted from a newly created research account with no prior interaction history. The account used neutral language and location settings and had not previously engaged with health-related or GLP-1 RA-related content. No videos were liked, shared, commented on, or followed during the sampling process. Videos posted between February 1st and May 31st, 2025, were retrieved in June 2025. The period was chosen because of increased public engagement with GLP-1 RA medications (Basch et al., 2023).

All candidate videos were viewed in full prior to inclusion. Eligibility was assessed through a structured screening protocol implemented on a spreadsheet, in which each criterion was operationalized as a binary variable indicating whether it was satisfied. To be eligible for inclusion, a video had to contain:

(1) spoken discourse in English,

(2) be publicly accessible at the time of data collection,

(3) its primary thematic focus had to be on GLP-1 RAs in the context of weight management or personal experience.

Videos were excluded if they did not meet these criteria, if they were duplicates or reposts, or if they were no longer publicly accessible at the time of screening.

To prevent disproportionate influence from highly active creators, no individual account was permitted to contribute more than 2% of the corpus (≤ 2 videos). Screening then proceeded sequentially through the search results until the target sample of 100 eligible videos had been reached. The target sample size of 100 videos was defined as *a priori* as analytically adequate for identifying recurrent linguistic, evaluative, and multimodal patterning across the dataset, while remaining compatible with the fine-grained manual transcription and multi-level annotation required. The individual video constituted the unit of analysis throughout the study. As with most platform-based social media research, exact reproduction of the dataset cannot be guaranteed because TikTok's ranking algorithms, content availability, and engagement metrics are dynamic and may vary over time. Nevertheless, the search query, temporal boundaries, inclusion criteria, and screening procedure are reported in sufficient detail to support procedural replication of the data-collection process.

Transcription and Corpus Preparation

For each eligible entry, multimodal data and metadata were extracted and catalogued. For each included video, spoken discourse was transcribed and prepared for corpus analysis. Transcription was performed using Whisper, an automatic speech recognition system developed by OpenAI (Radford et al., 2022). The generated transcripts were subsequently reviewed manually in order to correct recognition errors and ensure that the textual representation accurately reflected the original spoken content. Transcription followed light orthographic conventions appropriate for corpus-assisted discourse analysis.

The corpus consisted of spoken transcripts derived from the audio of the sampled videos. A clear distinction was maintained between verbal material incorporated into the corpus and non-verbal or visually embedded textual elements appearing within the video frame. Editing-generated overlays, emojis, captions embedded in the video image, hashtags, and other graphic text elements were excluded from the corpus used for lexical analysis and catalogued separately during multimodal annotation as platform-specific framing resources.

The resulting corpus contained 137,032 words of transcribed discourse. In addition to textual material, contextual metadata were recorded for each video, including upload date, engagement indicators such as likes, shares, and comments, and uploader identifiers where available. These metadata were collected in order to contextualize the circulation and visibility of the sampled videos within the platform environment.

Coding Framework and Multimodal Annotation

A preliminary coding framework was established prior to full annotation on the basis of the analytical categories guiding the study, and operational definitions were specified for each category (see **Appendix A** for the complete coding scheme, including operational definitions for all annotation categories). Spoken transcripts were compiled into a plain-text file for corpus analysis, while multimodal and contextual annotation data were recorded in a parallel analytical spreadsheet. Each video was assigned a unique identifier in order to maintain alignment between transcript data, annotation categories, and associated metadata throughout the analytical process.

Coding proceeded in three phases. In the first phase, the first ten videos were independently coded by the first author and a second trained coder in a pilot calibration phase. The resulting annotations were then compared in order to identify ambiguities, refine category definitions where necessary, and stabilize the coding framework before proceeding to full annotation. In the second phase, the first 40 post-pilot videos (videos 11-50; 40% of the dataset) were independently coded by the same two coders using the stabilized framework. Formal inter-coder agreement statistics were calculated on this subset before discrepancies were resolved, in order to evaluate the reliability of the coding procedure. For this reliability check, coders applied the stabilized scheme to overall evaluative stance toward GLP-1 RA medications (positive, mixed, cautious, and critical), metaphor presence, and the primary metaphor domain, using the inductively derived categories described below. Inter-coder agreement was substantial for stance (82.5% agreement; Cohen's $\kappa = 0.75$) and metaphor presence (87.5% agreement; $\kappa = 0.72$). Agreement on metaphor domains, calculated on the subset of 24 videos where both coders identified at least one metaphor, was likewise substantial (83.3% agreement; $\kappa = 0.78$). In the third phase, having confirmed substantial agreement, the same double-coding and adjudication procedure was applied to the remaining 50 videos (videos 51-100). Any discrepancies were reviewed and resolved through discussion. In cases where agreement could not be reached, a third trained reviewer was consulted to adjudicate the final coding decision. The final dataset reflects the adjudicated codes.

Creator-related variables were annotated on the basis of profile descriptions and video content. Multimodal annotation was conducted across verbal, visual, and aural domains, drawing on principles from social semiotics and multimodal discourse analysis. Visual annotation included camera framing, gaze orientation, body presentation, gestures, demonstrations of medication use, and the display of pharmaceutical packaging or medical devices. Aural annotation included background music, vocal delivery, pacing, and other sound cues where relevant to affective or evaluative framing. Editing-generated overlays, emojis, and other graphic text elements were catalogued as multimodal features. Evaluative positioning toward GLP-1 medications was examined through stance analysis following the framework proposed by Du Bois (2007), according to which stance involves the discursive evaluation of an object, the positioning of a speaker, and alignment with others.

For analytical purposes, stance was coded according to the speaker's evaluative orientation toward GLP-1 RA medications, with particular attention to supportive, cautionary, and critical positioning as realized through recurrent lexical, rhetorical, visual, and aural features. Metaphorical expressions in the transcripts were identified using the metaphor identification procedure vrije universiteit (MIPVU) (Steen et al., 2010). Transcripts were examined manually in order to identify metaphor-related words through comparison between contextual meaning and a more basic, concrete sense, following the procedure's core analytical

steps. Where a lexical item displayed a contrast between contextual and more basic meaning while remaining interpretable through comparison, it was marked as metaphorical. All identified metaphorical expressions were annotated in the analytical spreadsheet. In a subsequent inductive step, these expressions were grouped into broader metaphor domains on the basis of recurring source-target mappings observed across the dataset. This procedure led to the identification of four recurrent domains: transformation, battle, journey, and craving noise, with infrequent or idiosyncratic cases classified as others. Multimodal annotation was interpreted relationally by examining how verbal, visual, and aural cues combined within individual videos rather than by treating single features in isolation. Particular attention was paid to intermodal alignment, that is, the ways in which spoken language, embodied performance, sound, and platform-specific visual framing devices worked together to reinforce or qualify evaluative stance and broader framings of GLP-1 RA use, bodily transformation, and weight management.

Corpus-Assisted Analysis

Corpus-assisted discourse analysis was conducted using AntConc (Anthony, 2019) on the spoken-transcript corpus. Wordlists and frequency distributions were generated at the word-form level. Absolute frequency (AF) and normalized frequency (NF), per 1,000 tokens, were calculated to support comparison across lexical features. Concordance and collocational analyses were then employed to identify recurrent lexical patterns in discourse relating to GLP-1 RA medications, with collocational analysis targeting a ±4-word span around selected high-frequency node terms. Keyword analysis was carried out in Sketch Engine (Kilgarriff et al., 2014), where the TikTok transcript corpus was compared to the EnTenTen20 web corpus using log-likelihood keyness statistics, with EnTenTen20 serving as the reference corpus. The reference corpus was used as a broad benchmark for informal online language, allowing the identification of salient lexical items in the TikTok data without assuming direct comparability between corpora.

Corpus outputs were interpreted through an explicitly corpus-assisted rather than purely inferential logic. In this sense, frequency, keyword, concordance, and collocational patterns were treated as analytic cues guiding qualitative interpretation of recurrent discursive features. Particular attention was paid to lexical markers relevant to evaluative positioning, including modals, intensifiers, evaluative adjectives, cautionary formulations, and other rhetorical cues associated with supportive, cautionary, or critical stance. These verbal patterns were not interpreted in isolation but examined in relation to the multimodal annotation in order to account for how stance, persuasion, and authority were constructed across verbal, visual, and aural modes. The analytical procedure was therefore iterative and integrative. Lexical patterns identified through corpus outputs were examined alongside multimodal features such as gaze direction, gesture use, body presentation, vocal pacing, soundtrack selection, and editing-generated visual framing devices. This made it possible to analyze how recurrent verbal choices aligned with embodied performance and platform-specific semiotic resources in the construction of GLP-1 RA narratives on TikTok. Metaphorical expressions identified through MIPVU were likewise interpreted not only as lexical phenomena, but as part of broader multimodal framings through which medication use, bodily transformation, and weight management were discursively represented. Broader discursive framings concerning weight, health, and pharmaceutical authority were identified inductively through this iterative interpretation of recurring lexical, stance-related, metaphorical, and multimodal patterns across the dataset.

Ethical Considerations

This study complied with TikTok's terms of service and the AoIR 2019 Internet Research Ethics guidelines (Association of Internet Researchers, 2019). This study analyzed publicly accessible TikTok content and did not involve interaction with users, intervention in platform activity, or access to private or restricted data. Data collection was conducted through authorized institutional access to TikTok research tools (Project ID: 1723718073) and in compliance with TikTok's terms of service. No attempts were made to bypass privacy settings, access non-public user data, or engage in user profiling beyond the classification of publicly available creator information required for analysis. In order to minimize risks to user privacy, usernames, handles, and other directly identifying information were not reported in the analysis or in any published extracts. The analytical focus remained on discursive and multimodal patterning rather than on individual users. The study was conducted in accordance with institutional guidance governing research on publicly available online

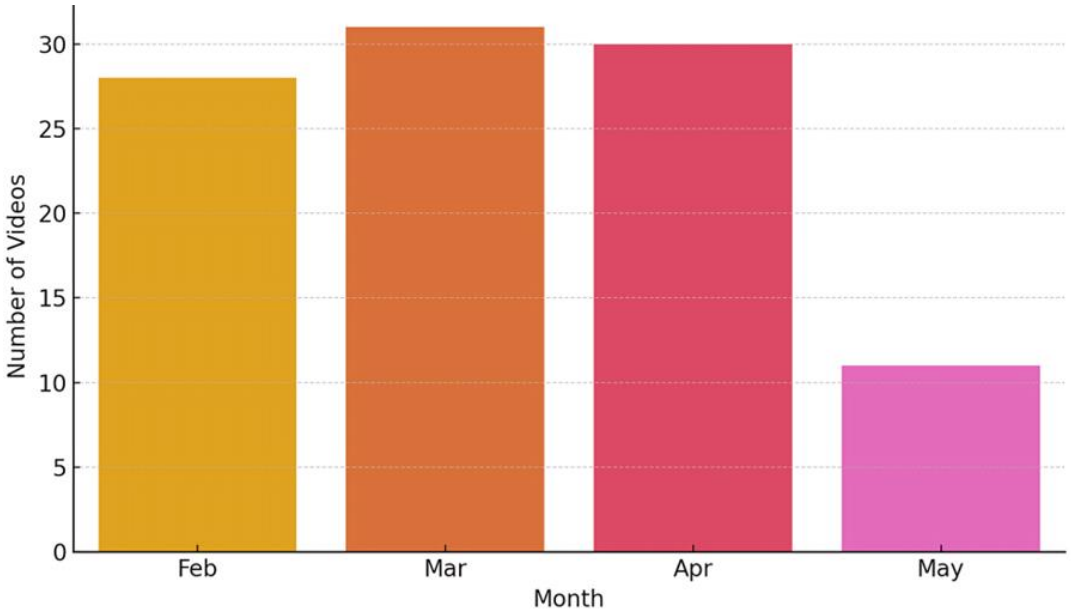

Figure 1. TikTok GLP-1 RA content uploads by month (Feb-May 2025) (Source: GLP-1 RA TikTok Corpus (n = 100 videos)

content and applicable data protection principles, including regulation (EU) 2016/679 (general data protection regulation). The research protocol was approved by the Ethics Committee at the Università di Brescia and classified as no risk in light of the public nature of the data and the non-interventionist design (Prot. n. 307740/2025).

Statistical Analysis

Descriptive statistics were used to summarize the distribution of coded variables across the dataset, including creator category, stance orientation, and metaphor domain, based on video-level frequencies and corresponding percentages. Where relevant, differences in the distribution of categorical variables across creator categories were explored using contingency tables at the video level. In the corpus-assisted component of the study, keyword analysis was conducted in Sketch Engine by comparing the TikTok transcript corpus with the EnTenTen20 reference corpus using log-likelihood keyness statistics. Sentiment polarity was estimated using VADER (Hutto & Gilbert, 2014) as a heuristic indicator and interpreted alongside manual stance codes rather than as a standalone quantitative outcome.

Analytical Stance and Reflexivity

The analytical process was informed by training in applied linguistics, health communication, and public health, as well as prior work on weight stigma and digital media. This background supported the identification of discursive and multimodal patterns but may also have oriented attention toward issues such as body politics, pharmaceuticalization, and health inequities when interpreting GLP-1 RA narratives. To mitigate this, coding decisions were guided by explicit codebooks, iterative discussion, and intercoder reliability checks, with discrepant cases resolved collaboratively. Interpretations of stance, metaphor, and multimodal framing in this corpus should therefore be read as situated within these disciplinary perspectives rather than as fully neutral accounts.

RESULTS

The dataset analyzed comprised 100 TikTok videos explicitly focused on GLP-1 RAs. These videos generated a corpus of 137,032 words, capturing the spoken language of the clips. Across these videos, audience interaction was notably high, with a cumulative total of 114,193 likes, 36,886 comments, and 34,791 shares. The videos totaled 254 minutes in length, underscoring substantial engagement and extensive discourse on the platform. The chronological distribution of videos can be seen in **Figure 1**.

Table 1. Most frequent verb and noun word forms in the GLP-1 RA TikTok corpus (absolute frequency and normalized per 1,000 words)

Most frequent verb forms				Most frequent noun forms			
Rank	Verb form	AF	NF	Rank	Noun form	AF	NF
1	be	5,250	38.31	1	weight	455	3.32
2	have	1,772	12.93	2	dose	362	2.64
3	do	1,564	11.41	3	month	358	2.61
4	get	683	4.98	4	video	335	2.45
5	lose	575	4.20	5	loss	286	2.09
6	go	479	3.50	6	comment	277	2.02
7	take	454	3.31	7	day	268	1.96
8	feel	393	2.87	8	effect	259	1.89
9	start	392	2.86	9	journey	245	1.79
10	use	302	2.20	10	food	245	1.79
11	thank	299	2.18	11	medication	228	1.66
12	help	274	2.00	12	people	215	1.57
13	need	269	1.96	13	side	210	1.53
14	eat	253	1.85	14	link	204	1.49
15	make	245	1.79	15	mounjaro	192	1.40
16	say	241	1.76	16	water	183	1.34
17	know	214	1.56	17	pound	182	1.33
18	see	193	1.41	18	time	178	1.30
19	work	191	1.39	19	health	171	1.25
20	want	188	1.37	20	GLP-1	161	1.18
21	try	174	1.27	21	semaglutide	159	1.16
22	think	164	1.20	22	user	153	1.12
23	stop	124	0.91	23	body	151	1.10
24	drink	123	0.90	24	inflammation	136	0.99
25	come	111	0.81	25	injection	136	0.99

Lexical and Collocational Patterns in the GLP-1 RA TikTok Corpus

The analysis points to a lexicon strongly centered on weight loss and medical treatment, marked by the frequent use of both action-oriented verbs and medical terminology. As shown in **Table 1**, the most frequent noun and verb word forms illustrate this thematic duality. Among the nouns, *weight* (AF = 455; NF = 3.32) and *loss* (AF = 286; NF = 2.09) co-occur frequently in the bigram "*weight loss*" (AF = 224; NF = 1.64), which functions as a dominant lexical anchor. Other high-frequency terms, such as "*dose*, *journey*, *glp-1*", and "*side effects*", further underscore the centrality of treatment monitoring, self-tracking, and biomedical framing.

Verb forms are dominated by auxiliary and light verbs (*be, have, do*), but semantically rich verbs like *lose, feel, and start* also feature prominently. These frequently co-occur with first-person references (*I, my*), reinforcing the testimonial, self-narrated quality of user discourse. This pattern suggests that personal health narratives are often constructed through embodied experience and temporally anchored transformation. In addition, collocational analysis identifies figurative and branded expressions, such as "*reset button*", "*ozempic face*", and "*week on wegovy*", that link pharmacological intervention with symbolic transformation. Medical terms like "*injection*" and "*effect*" often appear in comparative or sequential contexts (e.g., *diet* vs. *injection* and *injection timeline*), reflecting a procedural framing of GLP-1 use in everyday language.

Frequency summaries point to the prominence of key semantic domains and speaker-based variation. Weight-related, medication-related, and experiential terms are especially prominent among high-frequency items, underscoring their centrality in GLP-1 RA discourse. Speaker identity further shapes lexical choices: professionals (e.g., doctors and nurses) tend to employ more technical evaluatives (e.g., *manageable* and *monitor*), while lay creators favor hyperbolic positives (e.g., *amazing*, *incredible*, and *crazy*). Videos featuring frequent inclusive pronouns *we* (AF = 298; NF = 2.18) and *our* (AF = 212; NF = 1.55) also often include communal hashtags (e.g., #glp1community), reflecting a collective framing. Overall, the discourse blends biomedical authority with affective and participatory registers, as seen in high-frequency terms like "*support*" (AF = 172; NF = 1.26), "*community*" (AF = 101; NF = 0.74), and "*life*" (AF = 188; NF = 1.37).

Table 2. Stance and evaluation features in GLP-1 RA TikTok narratives

Feature category	Example(s)	AF	NF (per 1,000)
First-person plural pronouns	*we*, *our*	298/212	2.18/1.55
Second-person address	*you*, *your*	1,103/884	8.05/6.45
Rhetorical questions	*Can you believe I lost …?*, *Would you try this?*	64	0.47
Positive evaluative adjectives	*amazing*, *incredible*, *best*	173	1.27
Negative descriptors	*deflated*, *broken*, *inflammation*	136	0.99
Cautionary hedging/modality	*you should ask your doctor*, *it's helping, but …*	81	0.59
Support-oriented terms	*support*, *community*, *life*	172/101/188	1.26/0.74/1.37

Table 3. Metaphor domains in GLP-1 RA TikTok corpus (MIPVU-coded, NF per 1,000 tokens)

Metaphor domain	AF	NF (per 1,000)	Example phrase(s)
Transformation (magic)	100	0.73	a miracle for me, game-changer, magic shot, life-changing drug
Struggle/battle	65	0.47	fight cravings, war on obesity, battle my body, win this fight
Journey/progress	45	0.33	on this journey, road to my goal, every step counts, weight loss path, turned my life 180
Cravings as noise	30	0.22	food noise, the hunger pit, silencing the cravings, it's finally quiet

Stance and Evaluation in GLP-1 RA Narratives

The stance adopted is predominantly positive or neutral, constructed through testimonial language and alignment strategies. Sentiment-coded transcripts showed a clear skew toward positive polarity, suggesting that celebratory appraisal dominates. Frequent use of first-person plural pronouns and second-person address fosters identification and solidarity, often in forms like "*we all struggle with cravings*" or "*you need to hear this*". Rhetorical questions (e.g., *Can you believe I lost 30 pounds?*) implicitly assert shared evaluation, while intensifiers such as absolutely amazing or best decision ever amplify personal success narratives. Conversely, cautionary voices adopt hedging (*it's helping, but I still feel off*) or defer to authority (*you should ask your doctor*), signaling more ambivalent positioning. These patterns segment the discourse into endorsements, warnings, and reviews, often tied to creator identity. **Table 2** presents the most frequent stance and evaluation features in the corpus, offering quantitative support for these dynamics.

Metonymy and metaphor also serve evaluative functions (discussed in detail before). For example, many creators describe GLP-1 RA effects using warfare imagery (*inflammation is the enemy, fight hunger*) or emphasize transformation (*look at this before-and-after, magic pill*). Such figurative language both dramatizes experience and implicitly frames GLP-1 RA use as heroic or life-saving. Overall, the stance vocabulary underscores health and empowerment: high frequencies of words like "*health*, *strong*, *energy*, and *life*" (see **Table 1**) suggest that even celebratory weight-loss talk is couched in terms of wellbeing. In short, TikTok GLP-1 RA speakers predominantly adopt a supportive, authoritative-yet-relatable voice, using positive valuation to normalize and encourage GLP-1 RA use. This is consonant with corpus-assisted discourse approaches: Baker et al. (2008) emphasize that collocation analysis can reveal how subjectivity and ideology are constructed via language, and our corpus shows the language of authority and community co-occurring in TikTok GLP-1 discourse.

Stance and Evaluation Through Metaphor

Metaphorical language serves key evaluative functions, framing pharmaceutical use in terms of transformation, conflict, and personal growth. Using the MIPVU protocol (Steen et al., 2010), we identified 314 metaphorical expressions in the transcripts. In line with the inductively derived coding scheme described before, these expressions were grouped into four recurrent domains: transformation, struggle/battle, journey/progress, and cravings as noise, which together account for 240 instances. Less frequent or idiosyncratic mappings were coded as others and are not displayed in **Table 3**, including isolated references to illness, machinery, gaming, or other domains that did not form stable patterns in the corpus.

Transformation metaphors dominate (AF = 100; NF = 0.73), framing GLP-1 RAs as catalysts of rapid, almost magical change. Phrases such as a "*miracle for me*" or "*turned my life 180,* elevate the treatment to a salvific status, amplifying perceived efficacy and aligning with promotional rhetoric. While rhetorically powerful, such language risks oversimplifying gradual or complex medical outcomes. Battle metaphors (AF = 65; NF = 0.47) conceptualize weight loss as combat, casting the self against hunger or obesity (fight cravings, war on obesity).

Table 4. Most frequent multimodal features observed in the GLP-1 RA TikTok sample

Multimodal feature	Occurrences	Percentage (%)
Direct-to-camera framing	86	86
Explicit gestures	73	73
Background music	58	58
Text overlays	47	47
Clinical props	42	42
Professional attire	35	35

This framing promotes agency but also embeds discourses of discipline and adversity, potentially pathologizing appetite. Closely related are metaphors like *"food noise"* and "*silencing the cravings*" (AF = 30; NF = 0.22), which medicalize craving as an intrusive signal to be suppressed, reinforcing the necessity of pharmaceutical intervention. Journey metaphors (AF = 45; NF = 0.33) emphasize process and perseverance (*on this journey, road to my goal*). Though less frequent, they offer a counterpoint to the magic frame, foregrounding effort and incremental change. Their presence adds to temporal realism, situating transformation within longer trajectories of lifestyle change. These metaphorical framings construct distinct stances toward GLP-1 RA use. Miracle and game-changer affirm unambiguous praise, while fight or battle suggest ambivalence, asserting control but acknowledging struggle. Journey metaphors, meanwhile, position creators as reflective narrators of personal progress. Together, these metaphors reinforce the discourse's hybrid stance: celebratory but occasionally cautious, medicalized yet personal. Following Du Bois's (2007) stance model, metaphors here not only evaluate GLP-1 RA effects but align speakers with audiences who are imagined as co-participants in both recovery and resistance.

Multimodal Discourse Analysis

TikTok's inherently multimodal format, merging language, visuals, sound, and gesture, allows users to craft layered stance performances. In the sample of 100 GLP-1 RA-related videos, several visual and auditory strategies consistently aligned with linguistic stance. As shown in **Table 4**, the most frequent features include direct-to-camera framing (86%) and explicit gestures (73%), with over half of the videos also incorporating background music (58%).

Before-and-after imagery appeared in approximately one-third of cases, providing visual exemplification of efficacy (e.g., *week 1 vs. week 12, -50 lbs*) and reinforcing a triumphalist narrative. These images often co-occurred with emphatic overlays such as "*total game-changer*" or "*life-changing drug*", grounding abstract claims in visual proof. Frontal camera gaze and animated gestures (e.g., pointing to body parts and mimicking injection) further indexed speaker identity: lay users often expressed excitement through smiles and hand movements, whereas professionals tended to adopt still postures and calm delivery, conveying expertise. These embodied cues reinforced discursive positioning, peer support vs. medical caution. Text overlays served as metadiscursive anchors (e.g., *NOT a quick fix!)* that fixed interpretation and intensified stance. Hashtags like *#glp1community* and *#weightlossjourney* were also frequent, linking content to broader narratives of support, accountability, and transformation. Audio choices modulated tone: 42% of videos featured no music (mostly clinical content), enhancing authenticity, whereas others used trending audio to amplify celebratory tone or comic relief. These multimodal signals interact synergistically: celebratory stance is often double-coded via upbeat soundtracks and smiling delivery, while cautious discourse is anchored by slow pacing, silence, and professional visual cues. Together, these semiotic resources form cohesive multimodal "sentences" (Kress & van Leeuwen, 2006), aligning visual and verbal modes to signal speaker stance, emotional valence, and target audience.

Broader Social Narratives

Building on the lexical, stance, metaphorical, and multimodal patterns identified above, this section examines how GLP-1 RA-related TikTok discourses reproduce or challenge broader social narratives surrounding weight, health, and pharmaceutical authority. In our sample, the medicalization of obesity is reflected in frequent lexical markers such as "*inflammation*" (AF = 136; NF = 0.99), "*metabolism*" (AF = 53; NF = 0.38), and "*chronic*" (AF = 41; NF = 0.30), alongside recurring references to "*doctors*" (AF = 122; NF = 0.89) and "*studies*" (AF = 47; NF = 0.35). These terms foreground a biomedical model in which excess weight is framed

Table 5. Dominant and counter-discourses in the GLP-1 RA TikTok sample

Discourse theme	Frequency (%)	Example Lexis / Tags
Weight-normative framing	82	*weight loss*, #ozempicjourney
Medicalized obesity	71	*metabolism*, *chronic*, #insulinresistance
Institutional trust (healthcare)	55	*ask your doctor*, #nursesoftiktok
Institutional skepticism/populism	39	*scare tactics*, *they don't want us to …*
Weight-inclusive/holistic stance	6	*I'm not worried about weight*, #bodyneutral

as a pathological condition requiring clinical intervention. **Table 5** synthesizes the dominant and peripheral discursive themes observed across the dataset, illustrating recurrent weight-normative, medicalized, populist, and inclusive framings.

Weight-normative framings are particularly prominent: "*weight*" (AF = 455; NF = 3.32) and "*loss*" (AF = 286; NF = 2.09) are among the most frequent nouns overall, and hashtags such as *#weightlossjourney* appear in 28% of sampled videos. These patterns, together with concordance lines referencing dieting, body comparison, and transformation, construe GLP-1 RA use as a tool for achieving the thin ideal, in line with Minadeo and Pope's (2022) observation that TikTok often amplifies culturally dominant weight-loss narratives. Only a minority of creators explicitly challenge this framing. Videos prioritizing metabolic health or quality of life over aesthetics account for approximately 6% of the subset, indicating the marginal presence of weight-inclusive narratives in this dataset. These counter-narratives, while infrequent, are rhetorically distinct: phrases such as "*even if I don't lose weight*", "*my A1C is down*" or "*I just want to feel better*" reposition GLP-1 RAs as health tools rather than instruments of body modification. The discourse around pharmaceutical authority is bifurcated. On one side, many creators invoke clinical credibility, evidenced through visible credentials (e.g., scrubs and white coats), intertextual references to medical studies, and hashtags like *#nursesoftiktok* (11%). On the other, skepticism toward institutional regulation surfaces in comments warning about FDA intervention or insurance denials; phrases like "*scare tactics*", "*they're cutting us off*", and "*death dice*" articulate a populist defense of pharmaceutical access, sometimes valorizing alternative procurement routes such as compounding clinics or telehealth (Lupton, 2018). These framings reflect a tension between biomedical deference and user-driven resistance, consistent with previous critical discourse studies of health populism.

Table 5 also illustrates the visual and linguistic prominence of transformation narratives: approximately one-third of the videos display before-and-after imagery, and many use metaphorical or testimonial language (e.g., reset button and saved my life) to depict GLP-1 as both aesthetic and existential intervention. These discursive patterns contribute to what can be read as a moral narrative of transformation, whereby success is indexed by visible change and alignment with dominant health norms. Despite occasional instances of weight-inclusive or fat-positive rhetoric (e.g., *I'm not worried about weight loss, just energy levels*), the overarching stance in this corpus remains strongly weight-normative: thinness is valorized, and GLP-1 RAs are predominantly framed as powerful agents of correction, reproducing while intermittently contesting neoliberal body ideologies (Keyser-Verreault, 2018).

DISCUSSION

Findings from this study suggest a discourse likely shaped by TikTok's dominant weight-centric ideologies and its algorithmically-driven modes of visibility and engagement. Consistent with Minadeo and Pope's (2022) findings that TikTok nutrition content largely glorifies weight loss, we found that, in our sample, GLP-1 RA posts predominantly framed medication as a highly effective route to thinner bodies. Positive evaluative language (e.g., *life-changing* and *miracle*) and celebratory imagery predominated, reinforcing Somani et al.'s (2024) observation that social-media discussions of GLP-1 RAs are mostly neutral-to-positive in tone. These narratives implicitly endorse the pharmaceuticalization of obesity, presenting obesity as an individual problem best solved by drugs, a pattern also noted by Campos-Rivera et al. (2025) in TikTok semaglutide videos. In our data, the majority of videos normalized GLP-1 RA use and highlighted weight loss benefits without mentioning lifestyle changes, reinforcing norms that may align with commercial interests. Taken together, these patterns suggest that, in this corpus, TikTok discourse tends to reframe broader public health issues, such as obesity and dieting, through a weight-normative and consumer-oriented lens, privileging pharmacological solutions over structural or behavioral interventions, despite substantial evidence that long-

term wellbeing is best supported by sustained lifestyle changes and equitable health environments (Swinburn et al., 2019). As noted by Wilding et al. (2021), while GLP-1 RAs can be effective for weight management, they should be viewed as adjuncts, not substitutes, for dietary, physical activity, and psychosocial interventions in the treatment of obesity. However, our findings are descriptive of one hashtag-based sample and should not be read as evidence about all GLP-1 RA-related communication online.

Despite the dominant celebratory tone, our analysis also identified traces of ambivalence and critique. A minority of videos expressed caution, highlighting side effects or explicitly stating that GLP-1 RAs are not magic, suggesting the emergence of a more polarized discourse, reminiscent of the vaccine-related debates observed on TikTok (Kim et al., 2024). Van Poucke (2023) demonstrated that both pro- and anti-vaccination creators sought to elicit strong emotional responses within ideologically aligned audiences. Similarly, GLP-1 RA content appears to appeal to distinct affective communities: many creators employ upbeat music, rapid editing, and affirming captions to galvanize enthusiasm for these drugs, while others, including a small number of healthcare professionals, adopt a more cautious or critical stance. Taken together, our lexico-semantic and multimodal stance analysis points to an emerging us vs. them dynamic. Positive affect (e.g., joy and admiration) is strategically mobilized to reinforce pro-GLP-1 RA sentiment, whereas negative evaluations (e.g., fear and disgust) often accompany skeptical or warning-oriented content. This is consistent with Van Poucke's (2023) observation that competing sides in health-related discourse frequently use multimodal appraisal to strengthen in-group cohesion and differentiate themselves from opposing viewpoints. Metaphor analysis offers additional insight into the ideological underpinnings of GLP-1 RA discourse. Across the dataset, we identified recurrent conceptual metaphors that often frame GLP-1 RA medications as instruments or tools for combating fat. Many creators describe the drugs as enabling them to take control of their weight, language that metaphorically positions GLP-1 RAs as technologies or weapons deployed against bodily excess (Williams Camus, 2009). This battle framing, evident in expressions such as "*fat is an enemy*" or "*obesity is a war*", is well documented in health discourse and aligns with what Coll-Florit and Climent (2022) describe as war metaphors, which tend to individualize illness and reinforce stigma. Similarly, Semino et al. (2017) argue that war metaphors in cancer discourse can be double-edged: empowering for some patients but distressing for others, depending on context. Wright and Harwood (2009) further demonstrate that combative framings in obesity discourse align with neoliberal ideologies that emphasize self-control and moral responsibility for health. By contrast, some creators push back against the magical or transformative narrative, emphasizing that GLP-1 RAs are not magic but merely a tool to help, thereby shifting toward a personal responsibility frame. This tension, between enchantment and control, is frequently encoded in both linguistic and visual elements. While some TikToks elevate GLP-1 RAs as miracle drugs, invoking metaphors of magic and power, others underscore the role of agency and effort in weight management.

Our analysis suggests that creators often oscillate between portraying GLP-1 RAs as revolutionary cures and positioning them as one component within broader self-improvement narratives. These metaphors are further reinforced visually: before-and-after montage sequences, transformation journeys, and mechanical animations of blood sugar regulation contribute to a teleological and medical-scientific framing of weight loss. A key contribution of this study lies in unpacking how TikTok's communicative architecture shapes GLP-1 RA discourse. Christiansen et al. (2025) describe TikTok as a site for telling in which platform-specific features reconfigure earlier narrative genres. In our sample, GLP-1 RA content largely adopts the typical TikTok talking head and selfie explainer format, echoing Christiansen et al.'s (2025) observation that health professionals on TikTok often use static headshots and listicles. Many videos follow familiar platform conventions such as compilation edits, text overlays, background music, and green-screen slides, strategies intended to enhance algorithmic visibility. This participatory formatting reflects what Mordecai (2023) terms TikTok's visibility and association affordances, whereby trending hashtags like *#glp1* and *#WeightLossJourney* aggregate posts into thematic clusters, fostering communal engagement. Furthermore, TikTok's collapsed context (Christiansen et al., 2025) means these videos are potentially surfaced to broad, heterogeneous audiences. Unlike segmented forums (e.g., patient support groups or condition-specific platforms), TikTok presents health-related content within a unified, algorithmically curated feed.

Within this context, viewers may struggle to distinguish between content produced by credentialed professionals and that generated by lay influencers. In our dataset, explicit indicators of medical expertise were scarce; creators seldom referenced professional qualifications or institutional affiliations. Instead,

epistemic authority was often constructed through affective authenticity, signaled via emotional disclosure, personal transformation narratives, relatable delivery, and through influencer status. This dynamic reflects broader patterns identified by Leaver et al. (2020), who argue that influencer culture on platforms like TikTok frequently blurs the boundaries between expert and experiential knowledge, thereby shifting credibility heuristics from institutional validation to perceived sincerity and engagement. Our findings similarly suggest a marginal presence of expert voices in TikTok health discourse, highlighting broader concerns about how trust and epistemic authority are negotiated within algorithm-driven environments (Minadeo & Pope, 2022; Pelizzari et al., 2026). These affordances also seem to shape how stance is constructed multimodally. We observed that positive stance was frequently realized through synchronized visual and auditory cues: upbeat music, smiling expressions, and dynamic camera movements often co-occurred with affirmative lexical choices.

In contrast, videos that conveyed caution about GLP-1 RA use typically feature slower pacing, subdued color schemes, and on-screen text referencing medical risks or side effects. Van Poucke's (2023) extended appraisal framework, which incorporates visual attitudinal markers, proves particularly useful here: TikTok-native elements such as gestures, filters, and text fonts function as evaluative resources, carrying attitudinal meaning beyond verbal captions. In this sense, creators may strategically exploit TikTok's editing affordances to intensify or soften stance, aligning with Mordecai's (2023) argument that TikTok's editability and persistence enable the formation of digitally mediated health communities around shared narrative framings, such as enthusiasm for or skepticism toward GLP-1 RAs. Our methodology also carries implications for digital discourse analysis. Drawing on Thomas' (2014) recommendations for corpus-assisted research, we combined quantitative frequency analysis with detailed multimodal annotation to enhance methodological robustness and reduce risks of circular reasoning. This approach allowed us to analyze patterns across a broad sample of videos rather than overinterpreting isolated examples. Finally, the entwining of commercial interests and social norms emerged as a critical theme. TikTok content is frequently sponsored or self-promotional, blurring the line between peer-to-peer health narratives and strategic marketing.

Several posts in our dataset functioned effectively as advertisements, including explicit calls to action, affiliate links, branded visuals, and promotional codes. Campos-Rivera et al. (2025) caution that such content may reinforce potentially harmful norms in the interest of commercial actors. Indeed, many GLP-1 RA videos appear to implicitly reflect industry-aligned narratives by normalizing drug use and minimizing risk communication: only 14% of the videos in our dataset referenced serious side effects. Notably, some creators also mentioned discounts, savings programs, or compounded alternatives, further reinforcing the framing of GLP-1 RAs as consumer-friendly products rather than tightly regulated medical treatments (Jensen et al., 2025). This commercial slant may mislead impressionable viewers, particularly those with limited health literacy, by portraying pharmacological intervention as low-risk, readily accessible, and financially incentivized. In doing so, the content risks collapsing complex clinical decisions into simplified consumer choices. At the same time, TikTok's personal storytelling format can humanize pharmacological treatment, potentially reducing stigma surrounding medically managed weight loss. However, the ideological implications of GLP-1 RA discourse on the platform are complex. While such content may empower individuals to pursue appropriate medical care, it simultaneously reinforces narrow aesthetic ideals and situates health communication within a consumerist framework, one that privileges market visibility and emotional appeal over clinical accuracy and nuance.

This study's strength lies in its multimodal triangulation: we integrate corpus insights with discourse, metaphor, and visual analysis, providing a rich picture of GLP-1 RA communication on TikTok (Christiansen et al., 2025; Minadeo & Pope, 2022; Thomas, 2014; Van Poucke, 2023). Despite the study's contributions, certain limitations must be noted. Although substantial for a manually coded study, our corpus cannot encompass the full breadth of TikTok discourse. The sampling strategy, based on the #glp1, may privilege widely circulated formats while underrepresenting niche, technical, or clinically framed content. Moreover, while our coding procedures, including coding grids and inter-rater reliability checks, enhanced rigor, interpretation of stance, metaphor, and multimodal features remains partly subjective. Finally, platform specificity limits generalizability: TikTok's short-form, affect-driven grammar favors concise, anecdotal storytelling, whereas other platforms such as X or Reddit may support more dialogic or informational discourse patterns (cf. Somani et al., 2024). In addition, the use of VADER, which was developed for written social media text, on spoken

transcripts may introduce measurement bias, so automated sentiment outputs are treated as approximate cues that support rather than replace manual stance analysis. From a methodological perspective, future work could also incorporate transformer-based sentiment models and multimodal architectures that are more sensitive to emoji, prosody, and visual cues, as well as robustness checks using embedding-based approaches on TikTok language. Related work on LLM-mediated annotation workflows and deepfake-related affective analysis highlights both the opportunities and the risks of such techniques, particularly around prompt injection, hallucination, and emotional manipulation (AlSobeh et al., 2024, 2025). These constraints mean that our claims should be interpreted as indicative patterns within a specific platform context, rather than as generalizable estimates of public opinion or clinical understanding. These limitations, however, open up valuable opportunities for further investigation. Future studies should expand the dataset and examine how GLP-1 RA discourse manifests across other social media platforms. Longitudinal tracking could also shed light on how narratives evolve in response to pharmaceutical developments (e.g., the introduction of new drugs) or shifts in platform policies. Additionally, cross-cultural comparisons could illuminate how sociocultural norms shape digital health narratives across linguistic and regional contexts.

CONCLUSION

This study suggests that TikTok functions not merely as a channel for sharing health information, but as a discursive environment that shapes how GLP-1 RA medications are understood, promoted, and emotionally invested in. Through metaphor, stance, and multimodal affordances, many creators in our sample construct GLP-1 RAs as powerful tools of transformation, framed as miracle cures, weapons against fat, or journeys of self-control. These framings are often reinforced by upbeat music, dramatic visuals, and personal testimony, foregrounding pharmacological intervention while giving comparatively less attention to behavioral or structural approaches to health. Although some creators offer more cautious or inclusive narratives, the discourse observed in this corpus remains largely weight-normative, consumer-oriented, and emotionally amplified, raising critical concerns about how treatment is framed in environments where credibility may be tied more to affective authenticity than to medical authority. By integrating corpus-assisted discourse analysis with multimodal and metaphor analysis, this study offers insight into how meaning around GLP-1 RAs is co-constructed through language, visuals, and platform conventions within a specific TikTok hashtag context. The findings point to the importance of developing platform-aware health communication strategies that not only provide accurate information but also engage with the emotional and narrative forms through which health messages are shared on the platform. As GLP-1 RA use expands and public discourse continues to evolve, it is important that health professionals, educators, and researchers understand how digital storytelling may shape not only perceptions of medication but also broader ideas of health, responsibility, and transformation.

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APPENDIX A: CODING SCHEME FOR MULTIMODAL AND EVALUATIVE ANNOTATION

A Corpus-Assisted Multimodal Discourse Analysis of GLP-1 Receptor Agonist Narratives on TikTok

This appendix presents the complete coding scheme used for the annotation of the GLP-1 RA TikTok corpus described in the main text. Operational definitions are provided for each coding category. The individual video constituted the unit of analysis; all variables were coded at the video level. The scheme was developed prior to full annotation, calibrated during a pilot phase involving the first 10 videos, and stabilised before proceeding to the remaining dataset.

Creator category

Each creator was assigned to one of three mutually exclusive categories on the basis of publicly available profile descriptions and observable video content. Category assignment was determined by the most salient identifier: visible professional credentials, recognisable influencer practice, or personal testimonial framing.

Table A1. Creator category codes and operational definitions

Category	Operational definition
Healthcare professional	The creator displays verifiable medical or health credentials (e.g., MD, RN, NP, PharmD) in their profile or video, or wears professional attire (e.g., scrubs, white coat) and explicitly references a clinical training or role.
Lay user/ patient	The creator presents personal experience with GLP-1 RA medications without claiming professional health credentials. Includes personal testimony, progress updates, and lifestyle commentary.
Influencer/ content creator	The creator produces content as part of a recognizable content-creation or influencer practice (e.g., large following, brand partnerships, affiliate links, promotional codes) without claiming health credentials.

Note. Where a creator displayed characteristics of more than one category (e.g., a healthcare professional with visible influencer activity), assignment was resolved through coder discussion on a case-by-case basis

Evaluative stance toward GLP-1 RA medications

Each video was assigned a single overall stance code reflecting the speaker's dominant evaluative orientation toward GLP-1 RA medications, following the stance framework proposed by Du Bois (2007). Coding attended to the convergence of recurrent lexical choices, rhetorical strategies, visual presentation, and aural features within each video.

Table A2. Evaluative stance codes and operational definitions

Stance code	Operational definition	Indicative features
Positive	The creator expresses predominantly favorable evaluation of GLP-1 RA medications, emphasizing benefits, efficacy, or personal satisfaction.	Celebratory language (e.g., *life-changing, amazing, best decision ever*); upbeat tone and delivery; before-and-after imagery; smiling expression; affirmative gestures.
Mixed	The creator expresses both favorable and unfavorable evaluations without a clear dominant orientation.	Combination of positive claims and acknowledged drawbacks; hedged endorsements (e.g., *it works but…*); balanced presentation of benefits and side effects within the same video.
Cautious	The creator foregrounds uncertainty, potential risks, or conditions of appropriate use without overtly criticizing the medications.	Hedging language (e.g., *talk to your doctor, it depends, not for everyone*); measured or slower delivery; references to side effects, contraindications, or monitoring; clinical framing.
Critical	The creator expresses predominantly unfavorable evaluation, questioning the safety, efficacy, or ethical implications of GLP-1 RA medications.	Negative descriptors (e.g., *dangerous, overhyped, risky*); explicit warning language; skeptical or concerned tone; references to harms, misinformation, or systemic risks.

Note. A single stance code was assigned per video on the basis of the dominant evaluative orientation & where verbal and non-verbal cues conflicted, the overall evaluative direction was determined through coder discussion

Metaphor identification and domain classification

Metaphorical expressions were identified following the MIPVU (Steen et al., 2010). For each lexical item in the transcripts, the contextual meaning was compared with a more basic, concrete sense. Where a contrast was observed between contextual and basic meaning and the contextual meaning remained interpretable through cross-domain comparison, the item was coded as metaphorical. All identified metaphorical expressions were recorded in a analytical spreadsheet.

In a subsequent inductive step, metaphorical expressions were grouped into broader domains on the basis of recurring source-target mappings observed across the dataset. Where more than one metaphor domain was present in a single video, only the primary domain, defined as the most frequent or discursively prominent mapping in that video, was coded.

Table A3. Metaphor coding variables and operational definitions

Variable	Codes	Operational definition
Metaphor presence	Present/ absent	Whether at least one MIPVU-coded metaphorical expression occurs in the video transcript.
Domain: Transformation (magic)	Coded when primary	Source domain of magic, miracle, or radical change mapped onto GLP-1 RA effects (e.g., *miracle, game-changer, magic shot, reset button, life-changing drug*).
Domain: Struggle/battle	Coded when primary	Source domain of warfare or combat mapped onto weight loss or appetite management (e.g., *fight cravings, war on obesity, battle my body, win this fight*).
Domain: Journey/progress	Coded when primary	Source domain of travel or forward movement mapped onto the weight-loss process (e.g., *on this journey, road to my goal, every step counts, weight loss path*).
Domain: Cravings as noise	Coded when primary	Source domain of sound or interference mapped onto appetite or cravings (e.g., *food noise, silencing the cravings, the hunger pit, it's finally quiet*).
Domain: Other	Coded when primary	Metaphorical expressions not fitting the four domains above, including isolated or idiosyncratic mappings (e.g., illness, machinery, gaming).

Note. Inter-coder reliability for metaphor presence and domain classification was calculated on a subset of 40 videos

Multimodal annotation categories

Multimodal annotation was conducted across visual, aural, and editing-generated domains, drawing on principles from social semiotics and multimodal discourse analysis (Kress & van Leeuwen, 2006; Machin & Mayr, 2023). Each feature was coded as present or absent for each video. Features were interpreted relationally by examining how verbal, visual, and aural cues combined within individual videos rather than by treating single features in isolation.

Visual features

Table A4a. Visual annotation categories and operational definitions

Feature	Operational definition
Direct-to-camera framing	The speaker addresses the camera frontally as the primary shot composition, establishing a pseudo-interpersonal mode of address.
Gaze orientation	The predominant direction of the speaker's gaze during the video: direct (into the camera lens), averted (away from the camera), or shifting.
Body presentation	The creator's body is a focal element of the video content (full-body shots, body-part close-ups, body comparisons across time points).
Explicit gestures	Observable hand or body movements used to emphasize, illustrate, or demonstrate content (pointing to body parts, counting on fingers, mimicking injection, showing transformation with hand gestures).
Demonstration of medication use	The creator visibly shows the act of preparing or administering a GLP-1 RA injection, or handles medication packaging, devices, or related clinical materials on camera.
Clinical props	Medical or pharmaceutical objects are visible in the video frame (e.g., injection pens, pill bottles, medical devices, branded packaging, bathroom scales).
Professional attire	The creator wears attire conventionally associated with a healthcare role (e.g., scrubs, white coat, stethoscope).
Before-and-after imagery	The video includes an explicit visual comparison of the creator's body, appearance, or health metrics at two or more distinct time points.

Aural features

Table A4b. Aural annotation categories and operational definitions

Feature	Operational definition
Background music	Presence of non-diegetic music during the video, including trending platform audio, ambient soundtrack, or other background music.
Vocal delivery	Notable characteristics of the speaker's voice relevant to affective or evaluative framing (emphatic, calm, rapid, hesitant, emotional, authoritative).
Pacing	The overall tempo of the spoken delivery (fast, moderate, or slow), coded where relevant to the construction of stance, authority, or affective tone.

Editing-generated and platform-specific features

Table A4c. Editing-generated annotation categories and operational definitions

Feature	Operational definition
Text overlays	On-screen text added through video editing, including captions, labels, highlighted phrases, or titles. Excludes auto-generated closed captions.
Emojis and graphic elements	Emojis, stickers, arrows, icons, or other graphic elements embedded in the video frame through editing tools.
Hashtags (in-frame)	Hashtags visually displayed within the video frame, as distinct from those appearing only in the post description or metadata.
Green-screen/slide format	The creator uses a green-screen effect or presents information over slides, screenshots, or background images rather than filming in a naturalistic setting.
Compilation/montage editing	The video consists of multiple clips or images assembled sequentially (e.g., progress montage, before-and-after series, compilation of user reactions).

Note. Editing-generated overlays, emojis, and graphic text elements were excluded from the corpus used for lexical analysis and catalogued separately as platform-specific multimodal framing resources

Broader discourse themes

Broader discursive framings were identified inductively through iterative interpretation of recurring lexical, stance-related, metaphorical, and multimodal patterns across the dataset. Each theme was coded at the video level as present or absent. More than one theme could be assigned to a single video where multiple framings co-occurred.

Table A5. Broader discourse theme codes and operational definitions

Theme	Operational definition
Weight-normative framing	The video privileges thinness or weight loss as a primary health goal, marker of success, or desirable outcome. GLP-1 RA use is framed predominantly around achieving a thinner or smaller body.
Medicalized obesity	The video frames obesity or excess weight as a chronic medical condition requiring clinical intervention. Includes references to metabolism, inflammation, insulin resistance, hormonal regulation, or similar biomedical concepts.
Institutional trust (healthcare)	The video expresses trust in healthcare institutions, medical professionals, or established clinical evidence regarding GLP-1 RA medications. May include explicit endorsements of medical guidance or research findings.
Institutional skepticism/populism	The video expresses distrust toward regulatory agencies (e.g., FDA), insurance providers, or established medical institutions. May advocate for alternative procurement routes (e.g., compounding pharmacies, telehealth platforms) or frame institutional regulation as obstructive.
Weight-inclusive/holistic stance	The video explicitly de-centers weight loss as a primary goal, instead foregrounding metabolic health, quality of life, body neutrality, or holistic wellbeing as outcomes of GLP-1 RA use.

Note. Discourse themes were not mutually exclusive; a single video could be coded for multiple themes where relevant framings co-occurred (e.g., a video coded as both weight-normative and medicalized obesity)