

Online Exercise Advice for Anxiety Relief on Short-Form Video Platforms: A Cross-Sectional Content Analysis of Quality, Reliability, and Safety

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Research Article

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Abstract

Background

Exercise-related videos are increasingly used on short-form video platforms as informal sources of anxiety-relief advice. However, it is unclear whether these videos provide information that is reliable, practically useful, and safe for viewers. This study assessed exercise-based anxiety-relief videos on TikTok and Bilibili.

Methods

We conducted a cross-sectional content analysis of videos collected from TikTok and Bilibili between 15 and 22 March 2026. Searches were performed using the Chinese terms for “exercise” and “anxiety”. After excluding videos that had been available for fewer than 7 days, promotional content, duplicate or near-duplicate videos, and irrelevant records, 180 videos were included. Extracted variables included platform, uploader type, video duration, exercise type, and engagement indicators, including likes, collections, and shares. Overall quality was assessed using the Global Quality Scale (GQS), reliability using the modified DISCERN (mDISCERN), and safety using a researcher-developed checklist. Two reviewers independently assessed the videos, and Cohen’s kappa was used to evaluate inter-rater agreement.

Results

The final sample included 84 Bilibili videos and 96 TikTok videos. Bilibili videos received more likes, collections, and shares and were longer than TikTok videos. TikTok videos had higher safety scores, while GQS and mDISCERN scores did not differ significantly between platforms. Evaluation scores varied by uploader type: videos from institutions, medical professionals, and mental health professionals generally scored higher for quality, reliability, and safety than videos from general creators or peer experience sharers. Exercise type was associated with video duration, but not with GQS, mDISCERN, or safety scores. GQS, mDISCERN, and safety scores were positively correlated with one another, whereas engagement indicators were not significantly correlated with these evaluation scores.

Conclusions

Exercise-based anxiety-relief videos on TikTok and Bilibili varied in quality, reliability, and safety. Videos from professional or institutional sources generally provided more complete and safer information, while audience engagement did not reflect informational quality. Short-form videos may offer accessible exercise-related anxiety guidance, but users should interpret such content cautiously, particularly when videos lack clear safety information or professional support recommendations.

1 Background

Anxiety disorders affect a large proportion of the global population and impose a continuing burden on individuals, health systems, and society[1, 2]. The World Health Organization estimated that 359 million people were living with anxiety disorders in 2021, corresponding to approximately 4.4% of the global population. Anxiety disorders are commonly characterized by excessive fear, persistent worry, and related behavioural disturbances, which may interfere with daily functioning, reduce quality of life, and contribute to social and economic costs[3–5]. Because many people experience anxiety symptoms outside formal clinical care, public health strategies that are accessible in everyday settings are increasingly needed.

Exercise has emerged as a promising non-pharmacological strategy for alleviating anxiety symptoms and improving emotional well-being[6, 7]. Meanwhile, the environment in which people seek and receive health information has changed substantially with the growth of digital media. Short videos are now a common route through which users encounter health advice, as platform algorithms can rapidly expose large audiences to brief and visually engaging messages[8, 9]. TikTok, developed by ByteDance, and Bilibili, operated by Bilibili Inc., are two influential platforms where users may encounter content related to exercise, mental health, and self-management [10]. The popularity of short-form video platforms increased rapidly in the late 2010s, particularly after the launch and

expansion of Douyin and TikTok in 2016–2017. In China, short-video use has become especially widespread; by June 2024, there were 1.05 billion short-video users, accounting for 95.5% of all internet users in the country[11].

This media environment has direct implications for anxiety self-management. A growing number of videos present exercise as a way to ease anxiety, but it remains unclear whether such videos provide information that is accurate, practical, and safe for viewers. Compared with general fitness videos, exercise-based anxiety-relief videos may influence how users understand anxiety symptoms, select coping strategies, and perform exercise without professional supervision. Inadequate guidance may therefore lead to vague exercise prescriptions, exaggerated therapeutic claims, or insufficient safety precautions[12]. However, evidence regarding the quality, actionability, and safety of exercise-related anxiety-relief videos remains limited, particularly across major short-form video platforms. Therefore, this study conducted a cross-sectional content analysis to evaluate exercise-based anxiety-relief videos on TikTok and Bilibili, with a focus on their informational quality, practical actionability, and safety-related content.

2 Materials and methods

Ethical considerations

This study analysed publicly accessible videos from TikTok, developed by ByteDance, and Bilibili, operated by Bilibili Inc. The study did not involve contact with content creators or viewers, collection of private data, or reporting of identifiable personal information. Usernames, profile images, comments, and other identifying details were not extracted or presented. On this basis, formal ethics approval was not sought.

2.1 Video collection

Videos were searched and collected from TikTok and Bilibili between 15 March and 22 March 2026. The search strategy was designed to identify videos presenting exercise as a method for anxiety relief. On both platforms, the Chinese search terms “焦虑” and “运动” were used in combination. For each platform, the first 100 videos generated by the default comprehensive ranking algorithm were saved for screening. This sampling strategy was chosen to approximate the videos that ordinary users would be most likely to encounter when searching for anxiety-related exercise content.

All videos retrieved during the search period were screened against prespecified eligibility criteria. When a video appeared more than once, only the first retrieved version was retained. Videos that became unavailable before assessment were excluded.

2.2 Video characteristics

For each eligible video, we extracted information on platform, uploader identity, video duration, exercise type, and engagement indicators. Engagement indicators included the number of likes, saves, and shares recorded at the time of data extraction. Uploader identity was classified according to the apparent type of source, and exercise type was coded according to the main form of exercise presented in the video.

To reduce variation caused by changes in platform engagement over time, all extraction was completed within the same predefined collection window. Data were entered into a standardized extraction form. After extraction, the recorded information was checked by the research team against the original videos to identify and correct potential coding or entry errors.

2.3 Video review and categorization

Two authors (ZZ and LJ) independently screened all retrieved videos. Screening was first based on titles, cover images, and short descriptions. Videos considered potentially eligible were then watched in full before a final inclusion decision was made.

Videos were included when they met all of the following criteria: (1) the video was presented in Chinese; (2) the video was available on TikTok or Bilibili during the collection period; (3) the content explicitly connected anxiety with exercise; and (4) the video provided exercise-related information, advice, or demonstration intended to relieve, reduce, or manage anxiety symptoms.

Videos were excluded when they were: (1) unrelated to exercise-based anxiety relief; (2) only briefly mentioning exercise or anxiety without substantive relevant content; (3) mainly focused on non-exercise approaches, including medication, counselling, or general psychological advice; (4) duplicates or near-duplicate reposts; (5) commercial advertisements or promotional videos; (6) too limited in content to allow evaluation; or (7) inaccessible at the time of coding.

Eligible videos were further categorized by uploader identity and exercise type. Any differences between the two reviewers were discussed after independent screening, and the original video was rechecked when necessary before a final decision was reached.

2.4 Quality and Safety assessment

Two authors (ZZ and LJ) independently assessed the included videos. Agreement between the two reviewers was calculated using Cohen’s kappa (κ). When scoring differences occurred, a third author (WJP) reviewed the video, and the final score was determined after discussion.

Video quality was assessed using the Global Quality Scale (GQS)[13]. The GQS provides an overall judgement of the flow, completeness, and usefulness of health information, with higher scores reflecting better quality. Reliability was assessed using the modified DISCERN (mDISCERN) instrument[14, 15], The mDISCERN tool evaluates whether health information is presented in a clear, balanced, and transparent manner and whether it supports informed decision-making. Higher mDISCERN scores indicate greater reliability.

Safety was assessed using a researcher-developed checklist grounded in exercise prescription principles and risk considerations relevant to health communication[16]. The checklist was designed to determine whether the videos provided adequate safety-related information for viewers seeking anxiety relief through exercise. Specifically, it evaluated whether each video: (1) specified the target population, (2) provided safety precautions or contraindications, (3) avoided exaggerated or absolute therapeutic claims, (4) included sufficient exercise prescription details, and (5) recommended professional help when symptoms were severe or persistent. Each item was scored on a 3-point scale ranging from 0 to 2, with higher scores indicating better safety performance.

2.5 Statistical analysis

Statistical analyses were conducted using IBM SPSS Statistics, version 26.0. Descriptive analyses were used to summarize video characteristics, engagement indicators, and assessment scores. Continuous variables were reported as mean $\pm$ standard deviation or median and interquartile range, depending on their distribution. Categorical variables were summarized as counts and percentages.

Comparisons between platforms and uploader categories were performed according to the type and distribution of each variable. Independent-samples t tests or one-way analysis of variance were used for normally distributed continuous variables, while Mann–Whitney U tests or Kruskal–Wallis tests were used for non-normally distributed variables. Categorical variables were compared using chi-square tests or Fisher’s exact tests. Associations among quality, reliability, safety scores, and engagement indicators were examined using Spearman’s rank correlation coefficient. Statistical significance was defined as a two-sided P value < 0.05 .

3. Results

3.1 Video Screening Process

As shown in Fig. 1, the initial search identified the first 100 videos from each platform according to the default ranking order, yielding 200 videos for screening. Videos that had been available for fewer than 7 days at the time of collection, promotional or advertisement-based videos, duplicate or near-duplicate videos, and videos unrelated to exercise-based anxiety relief were then excluded.

On Bilibili, 16 videos were excluded after full-text video review, including 4 duplicate or near-duplicate videos and 12 irrelevant videos. This resulted in 84 eligible Bilibili videos. On TikTok, 4 videos were excluded, including 1 duplicate or near-duplicate video and 3 irrelevant videos, leaving 96 eligible videos. In total, 180 videos collected between 15 March and 22 March 2026 were included in the final analysis.

3.2 Basic Features and Platform Differences of Videos

Table 1 summarises the basic characteristics of the included videos by platform. Significant between-platform differences were observed for user engagement, video duration and safety, whereas no significant differences were found for informational quality or reliability.

Compared with TikTok, Bilibili videos received substantially greater user engagement. The median number of likes was 743.00 on Bilibili versus 268.50 on TikTok ($P = 0.007$), the median number of collections was 1374.50 versus 91.50 ($P < 0.001$), and the median number of shares was 208.00 versus 53.50 ($P = 0.008$). Bilibili videos were also markedly longer in duration, with a median of 8.39 min compared with 1.20 min for TikTok ($P < 0.001$). By contrast, no significant between-platform differences were detected for mDISCERN scores ($P = 0.593$) or GQS scores ($P = 0.244$), indicating broadly comparable reliability and overall quality across the two platforms. Safety scores differed significantly between platforms ($P = 0.005$), with TikTok showing a slightly higher median score than Bilibili.

Overall, these findings indicate that Bilibili videos were longer and generated greater audience interaction, whereas TikTok videos showed a modest advantage in safety, despite similar levels of overall quality and reliability.

Table 1
Video characteristics

Variables	Total (n = 180)	Bilibili (n = 84)	TikTok (n = 96)	Statistic	P
Likes, M (Q ₁ , Q ₃)	405.00 (75.50, 3825.25)	743.00 (115.75, 5873.25)	268.50 (56.00, 1884.50)	Z=-2.68	0.007
Collections, M (Q ₁ , Q ₃)	233.00 (40.25, 2546.75)	1374.50 (149.25, 11250.00)	91.50 (19.00, 343.50)	Z=-5.84	< .001
Shared, M (Q ₁ , Q ₃)	105.50 (16.00, 888.00)	208.00 (21.50, 2039.00)	53.50 (13.00, 424.75)	Z=-2.66	0.008
Duration (Min), M (Q ₁ , Q ₃)	2.12 (1.09, 8.30)	8.39 (2.37, 17.34)	1.20 (0.50, 2.10)	Z=-8.43	< .001
Mdiscernscore, M (Q ₁ , Q ₃)	2.00 (1.00, 3.00)	2.00 (1.75, 3.00)	2.00 (1.00, 3.00)	Z=-0.53	0.593
GQScore, M (Q ₁ , Q ₃)	3.00 (2.00, 4.00)	3.00 (2.00, 4.00)	3.00 (2.00, 4.00)	Z=-1.17	0.244
Safety, M (Q ₁ , Q ₃)	2.00 (2.00, 3.00)	2.00 (2.00, 3.00)	3.00 (2.00, 3.00)	Z=-2.79	0.005
Z: Mann-Whitney test					
M: Median, Q ₁ : 1st Quartile, Q ₃ : 3st Quartile					

3.3 Uploader characteristics

Table 2 compares video engagement and evaluation scores across uploader types. Significant differences by uploader type were observed for mDISCERN, GQS, and safety scores (all $P < 0.001$).

Videos uploaded by institutions, medical professionals, and mental health professionals generally received higher mDISCERN, GQS, and safety scores than those uploaded by general creators or peer experience sharers. For mDISCERN, the highest score was observed in the institution category; however, this category included only one video and should therefore be interpreted cautiously. Medical professionals, mental health professionals, and fitness professionals also showed relatively higher reliability scores, whereas general creators and peer experience sharers tended to receive lower scores.

A similar pattern was found for GQS and safety scores. Videos from professional or institutionally affiliated sources generally showed more complete and reliable information, while videos from general creators and peer experience sharers scored lower across the evaluated domains. These findings indicate that uploader type was associated with differences in the reliability, overall quality, and safety of exercise-based anxiety-relief videos.

Table 2
Reliability, safety and quality scores of videos according to the source of upload

Variables	Fitness professional (n = 11)	General creator (n = 25)	Institution (n = 1)	Medical professional (n = 7)	Mental health professional (n = 53)	Peer experience sharer (n = 83)	P
mDISCERN1, M (Q ₁ , Q ₃)	3.00 (2.00,3.00)	1.00 (1.00,2.00)	4.00 (4.00,4.00)	3.00 (3.00,3.50)	3.00 (3.00,3.00)	1.00 (1.00,2.00)	< .001
mDISCERN2, M (Q ₁ , Q ₃)	3.00 (2.00,3.00)	2.00 (1.00,2.00)	4.00 (4.00,4.00)	3.00 (3.00,3.50)	3.00 (3.00,4.00)	1.00 (1.00,2.00)	< .001
mDISCERN, M (Q ₁ , Q ₃)	3.00 (2.00,3.00)	1.00 (1.00,2.00)	4.00 (4.00,4.00)	3.00 (3.00,3.50)	3.00 (3.00,4.00)	1.00 (1.00,2.00)	< .001
GQS1, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	2.00 (2.00,3.00)	4.00 (4.00,4.00)	4.00 (3.00,4.00)	4.00 (3.00,4.00)	3.00 (2.00,3.00)	< .001
GQS2, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	3.00 (2.00,3.00)	4.00 (4.00,4.00)	3.00 (3.00,4.00)	3.00 (3.00,4.00)	2.00 (2.00,3.00)	< .001
GQS, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	2.00 (2.00,3.00)	4.00 (4.00,4.00)	4.00 (3.50,4.00)	4.00 (3.00,4.00)	3.00 (2.00,3.00)	< .001
Safety1, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	3.00 (3.00,3.00)	3.00 (3.00,3.00)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	< .001
Safety2, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	3.00 (3.00,3.00)	3.00 (3.00,3.50)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	< .001
Safety, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	3.00 (3.00,3.00)	3.00 (3.00,3.50)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	< .001
M: Median, Q ₁ : 1st Quartile, Q ₃ : 3st Quartile							

3.4. Type of exercise

As shown in Table 3, exercise type was significantly associated with video duration ($P = 0.009$), but not with user engagement, reliability, quality or safety. Videos involving HIIT, mind–body exercise and aerobic exercise tended to be longer, whereas running, swimming and general exercise videos were shorter.

No significant between-group differences were detected in likes ($P = 0.656$), collections ($P = 0.128$) or shares ($P = 0.527$). Likewise, mDISCERN ($P = 0.153$), GQS ($P = 0.344$) and safety ($P = 0.587$) scores did not differ significantly across exercise categories. Although some categories showed numerically higher median scores, these findings should be interpreted with caution because several exercise types were represented by very small numbers of videos.

Taken together, these results suggest that exercise type influenced the format of presentation, particularly video length, but had limited association with the informational reliability, overall quality or safety of the videos.

Table 3
Reliability, safety and quality scores of videos according to the type of exercise

Variables	Aerobic exercise (n = 2)	relaxation exercise (n = 1)	General exercise (n = 157)	HIIT (n = 1)	Running (n = 13)	Stretching (n = 2)	Swim (n = 1)	mind-body exercise (n = 1)	P
Likes, (Q ₁ , Q ₃)	35038.50 (17557.75, 52519.25)	667.00 (667.00, 667.00)	391.00 (81.00, 3402.00)	691.00 (691.00, 691.00)	174.00 (30.00, 3805.00)	2700.50 (1370.25, 4030.75)	34.00 (34.00, 34.00)	5910.00 (5910.00, 5910.00)	0.656
Collections, M (Q ₁ , Q ₃)	105729.00 (53093.50, 158364.50)	1521.00 (1521.00, 1521.00)	219.00 (41.00, 1964.00)	3730.00 (3730.00, 3730.00)	53.00 (15.00, 1784.00)	8530.50 (4295.75, 12765.25)	14.00 (14.00, 14.00)	19000.00 (19000.00, 19000.00)	0.128
Shared, M (Q ₁ , Q ₃)	19515.50 (9773.25, 29257.75)	122.00 (122.00, 122.00)	103.00 (17.00, 845.00)	562.00 (562.00, 562.00)	18.00 (5.00, 860.00)	3025.00 (1528.00, 4522.00)	16.00 (16.00, 16.00)	4752.00 (4752.00, 4752.00)	0.527
Duration, M (Q ₁ , Q ₃)	26.38 (25.49, 27.28)	6.34 (6.34, 6.34)	2.10 (1.08, 7.36)	31.38 (31.38, 31.38)	1.33 (1.07,2.15)	18.69 (17.36, 20.02)	1.24 (1.24, 1.24)	30.04 (30.04, 30.04)	0.009
mDISCERN, M (Q ₁ , Q ₃)	2.00 (2.00,2.00)	0.00 (0.00, 0.00)	2.00 (1.00, 3.00)	2.00 (2.00,2.00)	1.00 (1.00,2.00)	1.50 (1.25, 1.75)	3.00 (3.00, 3.00)	4.00 (4.00,4.00)	0.153
GQS, M (Q ₁ , Q ₃)	3.00 (3.00,3.00)	2.00 (2.00,2.00)	3.00 (2.00, 4.00)	2.00 (2.00, 2.00)	3.00 (2.00,3.00)	3.00 (3.00, 3.00)	4.00 (4.00, 4.00)	4.00 (4.00,4.00)	0.344
Safety, M (Q ₁ , Q ₃)	2.50 (2.25,2.75)	2.00 (2.00,2.00)	2.00 (2.00, 3.00)	2.00 (2.00 ,2.00)	2.00 (2.00,3.00)	2.00 (2.00, 2.00)	3.00 (3.00, 3.00)	3.00 (3.00,3.00)	0.587

3.5 Correlation analysis

Inter-rater reliability was first assessed using Cohen's kappa coefficient. The kappa values were 0.562 for GQS, 0.849 for mDISCERN and 0.626 for safety, indicating moderate agreement for GQS and safety and strong agreement for mDISCERN.

As shown in Table 4, significant positive correlations were observed among GQS, mDISCERN and safety. GQS was strongly associated with mDISCERN ($r = 0.823$, $P < 0.001$) and moderately associated with safety ($r = 0.627$, $P < 0.001$), while mDISCERN was also positively correlated with safety ($r = 0.657$, $P < 0.001$). These results indicate substantial consistency across the three evaluative domains.

No significant correlations were found between video quality indicators and audience engagement metrics, including likes, collections and shares (all $P > 0.05$). By contrast, duration showed weak but significant correlations with GQS ($r = 0.177$, $P = 0.017$), mDISCERN ($r = 0.152$, $P = 0.042$) and safety ($r = -0.213$, $P = 0.004$). Taken together, these findings suggest that audience interaction was not a reliable marker of video quality, reliability or safety, whereas video length showed only limited associations with these measures.

Table 4
Spearman correlation between video quality and audience interaction on Bilibili/
TikTok

	GQS		mDISCERN		Safety	
	r	p-value	r	p-value	r	p-value
GQS						
mDISCERN	0.823	< 0.001				
Safe	0.627	< 0.001	0.657	< 0.001		
Likes	-0.019	0.797	-0.053	0.482	-0.050	0.504
Collections	-0.005	0.948	-0.028	0.705	-0.110	0.142
Shared	-0.008	0.912	-0.040	0.590	-0.052	0.486
Duration	0.177	0.017	0.152	0.042	-0.213	0.004

Bold text means the P-value < 0.05

$|r| \leq 0.2$ no relationship; $0.2 < |r| \leq 0.4$ weak relationship; $0.4 < |r| \leq 0.6$ moderate relationship; $0.6 < |r| \leq 0.8$ strong relationship; $|r| > 0.8$ very strong relationship

4 Discussion

This cross-sectional content analysis examined exercise-based anxiety-relief videos on TikTok and Bilibili from three perspectives: informational quality, reliability, and safety. Several patterns emerged from the analysis. Bilibili videos were longer and received higher levels of user engagement than TikTok videos, but the two platforms showed similar GQS and mDISCERN scores. TikTok videos had slightly higher safety scores. Evaluation scores also varied by uploader type, with videos from institutions, medical professionals, and mental health professionals generally scoring higher than those from general creators and peer experience sharers. In contrast, exercise type was related mainly to video duration and showed no clear association with reliability, quality, or safety. Engagement indicators, including likes, collections, and shares, were not significantly correlated with the three evaluation domains.

These findings indicate a disconnect between audience interaction and informational value. Videos with more likes, collections, or shares were not necessarily more reliable, higher in quality, or safer for viewers. This is particularly relevant for anxiety-related exercise content. Such videos are not merely general fitness messages; they may influence how viewers understand anxiety symptoms, whether they attempt exercise-based self-management, and whether they seek professional support when symptoms are severe or persistent [17, 18]. Therefore, safety-related information, including target population, precautions, exercise prescription details, and referral advice, should be considered a central component of this type of content rather than an optional addition.

The difference in safety scores between platforms deserves cautious interpretation. TikTok videos showed slightly higher safety scores than Bilibili videos, despite being shorter and receiving lower engagement. One possible explanation is that some TikTok videos may deliver more concise and direct guidance, whereas longer Bilibili videos may provide broader explanations without necessarily including explicit contraindications, target groups, or professional help recommendations. However, this interpretation cannot be confirmed from the present data and should be viewed as exploratory. Future studies could examine video structure and message framing in more detail to determine why safety-related content varies across platforms.

The present findings are consistent with previous studies showing that health-related short videos often vary substantially in quality, reliability, and completeness. Prior research on topics such as gastroesophageal reflux disease, brain tumour, osteoarthritis, and adolescent depression has reported that short-video content on platforms such as TikTok and Bilibili is frequently uneven in quality and may not consistently meet users' informational needs[12, 19–22]. Our study adds to this literature by focusing on exercise-based anxiety relief, a topic that combines mental health self-management with physical activity guidance. This focus is important because incomplete or overly simplified exercise advice may not only reduce informational usefulness but may also create safety concerns for viewers who attempt unsupervised exercise.

Uploader type was one of the clearest sources of variation in this study. Videos uploaded by institutions and professionally affiliated creators generally achieved higher mDISCERN, GQS, and safety scores than those uploaded by general creators or peer experience sharers. This pattern is understandable. Exercise-based anxiety-relief content requires more than general encouragement to be physically active. Ideally, it should provide appropriate exercise details, clarify who the advice is suitable for, avoid exaggerated claims, and acknowledge when professional care may be needed. Institutions and health-related professionals may be better positioned to present these elements in a structured and cautious manner. By contrast, general creators and peer experience sharers may be more likely to rely on personal experience, motivational language, or simplified messages. Although such content may be relatable, it may provide less complete guidance for viewers seeking anxiety relief through exercise.

Another important finding was the lack of significant correlations between engagement indicators and evaluation scores. This suggests that user interaction metrics should not be interpreted as evidence of informational quality. On short-form video platforms, engagement may be shaped by factors such as emotional appeal, entertainment value, presentation style, creator popularity, and algorithmic recommendation. These factors can increase visibility without necessarily improving accuracy, balance, or safety. For anxiety-related content, this issue may be especially important because simple “quick-relief” messages or personal narratives may attract attention even when they do not include sufficient precautions or referral guidance.

Video duration showed only weak associations with evaluation scores. Longer videos were weakly positively correlated with GQS and mDISCERN, suggesting that additional time may allow creators to provide more explanation. However, duration was weakly negatively correlated with safety, indicating that longer videos do not automatically provide safer guidance. This finding highlights that the content and structure of the message may be more important than length alone. A longer video may discuss anxiety or exercise in greater detail but still fail to specify contraindications, target populations, or when professional help should be sought.

Exercise type was associated with video duration but not with quality, reliability, or safety. This suggests that differences among videos were less related to the specific exercise modality and more related to how information was communicated. Whether a video presented aerobic exercise, mind–body exercise, stretching, running, or general exercise advice, its informational value depended on whether the message was clear, balanced, actionable, and safety-conscious. Therefore, efforts to improve exercise-based anxiety-relief videos should focus not only on promoting particular exercise modalities but also on improving communication standards across all types of exercise content.

This study has several implications. For viewers, the findings suggest that highly engaged videos should be approached cautiously, particularly when the content concerns mental health self-management. Users should pay attention to the source of the video and whether the content provides specific, balanced, and safety-related guidance. For health professionals and institutions, short-form video platforms may offer an opportunity to disseminate evidence-informed exercise advice for anxiety relief, but such content should include clear boundaries and referral information. For platforms, improving the visibility of credible and safety-conscious content may be important, especially for videos addressing mental health symptoms.

Several limitations should be considered when interpreting the findings. First, the study captured videos during a specific collection period, and short-video rankings and engagement metrics may change rapidly over time. Second, the search was limited to two Chinese keywords and two platforms, so some relevant videos may not have been retrieved. Third, the analysis focused on top-ranked videos, which may represent content commonly encountered by users but not the full range of available videos. Fourth, several uploader and exercise-type categories included small numbers of videos, which limits the stability of subgroup comparisons. Fifth, the safety checklist was developed for this study and, although based on exercise prescription and health communication considerations, has not been externally validated. Finally, the study assessed video content rather than user behaviour or clinical outcomes; therefore, it cannot determine whether watching these videos changes anxiety symptoms, exercise behaviour, or help-seeking.

In summary, exercise-based anxiety-relief videos on TikTok and Bilibili showed uneven informational quality, reliability, and safety. Uploader type appeared to be more closely related to evaluation scores than platform engagement or exercise type. These findings suggest that source credibility and safety-conscious communication are central concerns when short-form videos are used for mental health-related exercise guidance. Greater participation by professional and institutional sources may help improve the quality and safety of exercise-based anxiety-relief information available on short-form video platforms.

5 Conclusion

Exercise-based anxiety-relief videos on TikTok and Bilibili showed variable quality, reliability, and safety. Although Bilibili videos were longer and received greater engagement, the two platforms had similar overall quality and reliability scores. Videos from institutional and professionally affiliated sources generally performed better than those from general creators or peer experience sharers, while engagement metrics were not associated with informational quality or safety. These findings indicate that short-form videos may provide accessible exercise-related anxiety guidance, but users should not rely on popularity as a marker of credibility. More safety-conscious and evidence-informed content from professional sources is needed to support mental health-related exercise communication on short-form video platforms.

Declarations

Ethics approval and consent to participate:

Not applicable.

Consent for publication:

The study does not involve human participants and therefore cannot be applicable.

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The authors declare no competing interests.

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Author Contribution

ZZ conceptualized and designed the study, developed the search strategy, collected and extracted the data, performed the statistical analyses, and drafted the initial manuscript. LJ contributed to study design, video evaluation, data interpretation, and critical revision of the manuscript for important intellectual content. Both authors read and approved the final manuscript.

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Data availability:

Requests for data access can be directed to the corresponding author.

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Figures

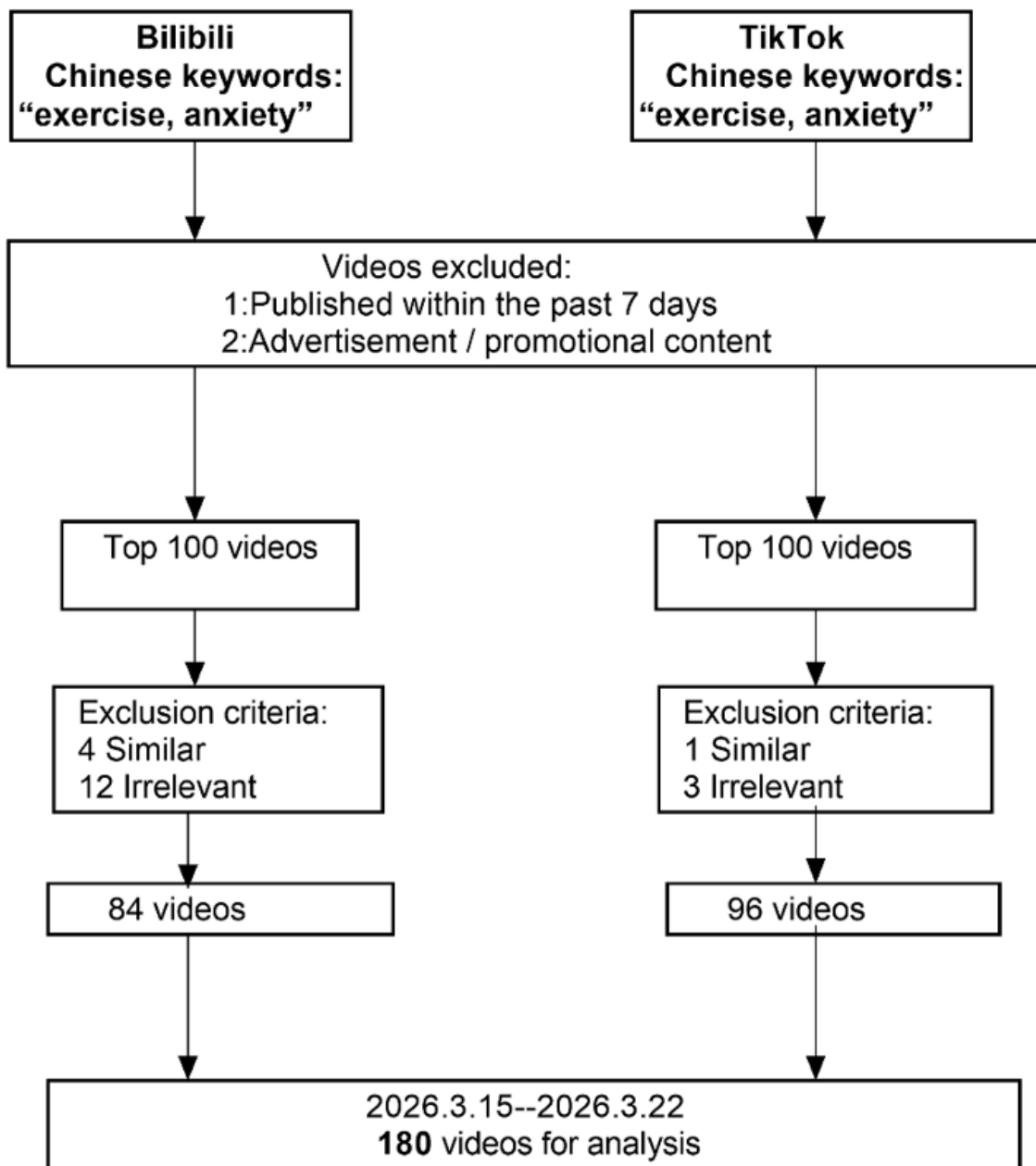


Figure 1

Flow chart diagram of the included and excluded videos