

# Analysis of Acute Non-specific Back Pain Content on TikTok: An Exploratory Study

Andrey Zheluk<sup>1</sup>, Judith Anderson<sup>1</sup>, Sarah Dineen-Griffin<sup>1</sup>

<sup>1</sup>. School of Nursing, Paramedicine and Healthcare Sciences, Charles Sturt University, Bathurst, AUS

**Corresponding author:** Andrey Zheluk, andreyzheluk@gmail.com

Review began 12/10/2021

Review ended 01/17/2022

Published 01/19/2022

© Copyright 2022

Zheluk et al. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 4.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Abstract

### Introduction

In this study, we evaluated the scope of acute non-specific back pain (ANSBP) content available on TikTok (ByteDance Ltd, Beijing, China) in 2021. It is plausible that TikTok's popularity among teenagers, adolescents, and young adults may influence decision-making about what constitutes appropriate ANSBP self-care among a younger age cohort.

### Methods

We examined 157 of the most viewed videos available through the hashtag #backpain available on TikTok in September 2021. We examined the following research questions: (1) What are the metadata characteristics of the videos in the final data set?, (2) What are the creator identities reflected in the final data set in this study?, (3) What are the ANSBP self-care content themes in the final data set?, and (4) What are the characteristics of the data set based on a low back pain reference checklist based on consensus guidelines?.

### Results

We identified clear differences based on TikTok creator identity in our data set of most popular videos. We examined videos created by chiropractors, fitness professionals, influencers, physicians, physiotherapists, and other creator identities. We found that the TikTok videos created by chiropractors were consistently among the most viewed, most commented, and most shared. Conversely, chiropractic TikTok videos consistently had the lowest self-care reference checklist scores relative to all other disciplines. That is, TikTok videos created by chiropractors were least likely to reflect the scientific consensus on treating ANSBP.

### Discussion

TikTok is an increasingly popular medium for disseminating short health messages. The main cohort using TikTok is young and at risk of ANSBP. However, we postulate that the messages reaching young TikTok users overall do not generally reflect the self-care advice described in consensus guidelines.

### Conclusion

TikTok is a popular social media channel among young people. However, the most viewed TikTok videos about ANSBP are not produced by mainstream health professionals and the videos featuring the #backpain hashtag do not generally reflect contemporary evidence-based practice. There is considerable scope for mainstream health professionals to provide evidence-informed self-management and self-care content for ANSBP on TikTok.

**Categories:** Physical Medicine & Rehabilitation, Healthcare Technology

**Keywords:** research methods and design, public health informatics, tiktok, social media analytics, lower back pain (lbp)

## Introduction

This exploratory study aims to increase the understanding of acute non-specific back pain (ANSBP) content available on TikTok (ByteDance Ltd, Beijing, China). This paper will also examine whether approaches used to analyse YouTube (Google LLC, Mountain View, California, United States) health videos can be applied to TikTok health content. Low back pain imposes a high social and financial burden in all countries across the globe [1]. In the introduction, we have examined the epidemiology of low back pain in younger populations, self-management and self-care of back pain, an overview of TikTok, and approaches to the analysis of health information on TikTok.

### Epidemiology of ANSBP in younger populations

Acute low back pain is generally regarded as lasting less than six weeks [2]. In most cases, acute low back pain is non-specific [3,4]. The diagnosis of non-specific low back pain implies no known causes such as

#### How to cite this article

Zheluk A, Anderson J, Dineen-Griffin S (January 19, 2022) Analysis of Acute Non-specific Back Pain Content on TikTok: An Exploratory Study. Cureus 14(1): e21404. DOI 10.7759/cureus.21404

infection, tumour, fracture, aneurysm, or cauda equina [2]. ANSBP is also a leading cause of disability among teenagers, adolescents and young adults. Further, low back pain in adolescents and young adults is a significant risk factor for low back pain in adulthood [5,6]. Although ANSBP is common among younger people, it is usually not serious, and usually resolves within a few weeks.

## Self-management and self-care of low back pain

Most people manage their low back pain with minimal assistance from health care providers. Independent management without assistance from health care providers is generally referred to as self-care [6]. By contrast, self-management implies health provider-guided patient management of a health condition such as back pain [7]. Researchers have suggested self-management and self-care involve active patient decision making, symptom monitoring, goal setting, and information searching [8]. There are features of social media platforms that may influence patient self-care decision making. For example, researchers have suggested anecdotal information on social media, including the number of views, comments, and likes may influence health decision making. However, indicators such as the number of views, comments, and likes of a TikTok video are not direct measures of influence on health decision making. Rather, these indicators represent video popularity [9-11]. As a consequence, it is plausible that TikTok's popularity may influence decision making about what constitutes appropriate ANSBP self-care among a younger age cohort. In this study, we examined the most viewed TikTok health videos. These most-viewed TikTok videos may influence self-care decision making about ANSBP among TikTok users. Examination of self-care decision making about ANSBP among TikTok users is beyond the scope of this study.

## About TikTok

TikTok is a video-sharing focused social networking service launched in 2018 [12,13]. TikTok hosts a variety of short videos, in fixed categories, including dance and fashion. The duration of these videos ranges from 15 seconds to 3 minutes. Since 2018, TikTok use has grown rapidly. In December 2018, TikTok globally had more than 271 million active monthly users, and 1 billion by September 2021 [14]. A 2021 national United States (US) Pew Research study found phone application users aged 18 to 24 years were likely to report using Instagram (76%), Snapchat (75%), or TikTok (55%) [15]. In 2020, 69% of the TikTok user base were aged 13 to 24 years [16]. In summary, TikTok is a popular social medium used by a younger age cohort. This age cohort is also likely to experience ANSBP.

## Health information on TikTok

Google Scholar suggests scientific engagement with TikTok began in 2018. In 2021, health content on TikTok had still not been widely examined in scientific literature. In 2021, there was nascent literature on analysing TikTok videos for health self-care. Among the health care conditions researched were COVID-19 [17], diabetes [18], mental health [19], safe sex [20], dermatology [21], chronic obstructive pulmonary disease (COPD) [22], and oral health [23]. We did not identify any peer-reviewed papers examining TikTok video use for ANSBP.

TikTok has been associated with misinformation in the mass media. In 2021, media monitoring organisation NewsGuard reported COVID-19 vaccine misinformation directed at children aged under 13 on TikTok [24]. The creators suggested TikTok was not adequately monitoring health disinformation. Conversely, TikTok community guidelines are directed at preventing health disinformation [25]. TikTok has reported that community guidelines for creators, including health content, are strictly enforced [26].

### *Approaches to TikTok Health Video Analysis*

TikTok in 2021 was a relatively novel medium for health content. The limited peer-reviewed health literature on TikTok in 2021 revealed heterogeneous approaches to research into this social media platform. However, by 2021, there was a larger body of research describing the use of YouTube videos to reach specific groups with condition-specific health messages. In 2021, YouTube was the second most popular social medium and the most popular video social medium [27]. The approaches to analyses of YouTube videos are more mature than that of TikTok. Given the similarities between YouTube and TikTok, we suggest that the methods of analysis of YouTube videos may be applicable to that of TikTok.

Several investigators have examined the methods used to analyse YouTube health content. Drozd and colleagues noted that most researchers develop independent scoring systems and that no commonly agreed on methods exist [28]. Systematic reviews of YouTube analysis methods have focused on the use of validated reference checklists and described the range of approaches and indicators across multiple studies [29,30]. In 2020, Zheluk and Maddock described three broad approaches to the analysis of YouTube health content [31]. These approaches were: (1) analysis of the video metadata exclusive of the content; the most common metadata elements included the number of views, video length, likes, date posted, and language of the video, (2) information quality of videos using validated instruments such as DISCERN (no abbreviation), Journal of the American Medical Association (JAMA) Benchmark Criteria, and Health on the Net Foundation Code of Conduct (HONcode) to evaluate the quality of health information directed at consumers and clinicians; Lee and colleagues reviewed several approaches to assessing health information quality and

among the common dimensions by these researchers were accuracy, completeness, consistency, timeliness, validity, and uniqueness [32], and (3) evaluation of video content by expert clinicians by comparing content to reference standards.

Researchers have adopted the methods used for analysing YouTube videos for analysing TikTok health content. These approaches include analysis of information quality using the DISCERN instrument, by creator professional background, by expert clinical review, or by metadata (for example, the number of views, number of comments and likes) [18,21,33]. This research study aims to increase the understanding of ANSBP content on TikTok and to further develop methods for analysing TikTok video content.

## Materials And Methods

This exploratory study aimed to evaluate the scope of ANSBP content available on TikTok in September 2021. In order to evaluate the scope of ANSBP TikTok content, we examined the following research questions (RQs). RQ1: What are the metadata characteristics of the videos in the final data set?, RQ2: What are the creator identities reflected in the final data set in this study?, RQ3: What are the ANSBP self-care content themes in the final data set?, and RQ4: What are the characteristics of the data set based on a low back pain reference checklist?

We modified the methods developed by Zheluk and Maddock for their analysis of YouTube videos about acute non-specific low back pain (ALBP) [31]. First, in this study, we have assumed that ANSBP TikTok videos are viewed by patients for self-care guidance only (i.e., TikTok videos are viewed independent of health advice). The study by Zheluk and Maddock primarily focused on self-management guidance (i.e., videos intended to complement advice from health and fitness professionals). Second, we have modified the definition of ALBP used by Zheluk and Maddock to include all spinal pain. TikTok videos tagged with #backpain were included in our data set and, thus, include all spinal pain including neck pain. We have expanded the scope of included TikTok videos, as the result of limited anatomical localisation of the pain site in most videos reviewed in the final dataset. Third, in this project, we did not analyse information quality. Zheluk and Maddock found that the Brief DISCERN information quality instrument was less sensitive in identifying differences in the self-management content of YouTube videos than an evidence-based reference list [31]. Similarly, Azer and colleagues suggested that information quality tools were not suitable for analysis of YouTube video content [34].

### Data collection and cleansing to obtain the final data set

We first identified ANSBP TikTok videos for analysis through three steps.

#### *Step 1: Selection of Search Terms for Content Discovery*

Users can access TikTok videos through the TikTok algorithm or hashtags (#). The TikTok algorithm will serve individualised content to each TikTok user [35]. Hashtags are a facilitator for discovery of specific themed content on TikTok. A single TikTok video may have multiple hashtags. We identified the hashtag “#backpain” as the most viewed relevant TikTok search term (Table 1). By September 2021, TikTok videos with #backpain had produced 1.3 billion views [36]. From a temporal perspective, the views on TikTok represent the aggregate global views of each individual #backpain TikTok video since publication. No national or subnational TikTok view data is publicly available

TikTok hashtag (#)	Views as of September 30, 2021
#Backpain	1.3 billion views
#Backpainexercises	5.9 million views
#Backpainrelief	236.8 million views
#Chiropractic	3.8 billion views
#Diabetes	2.7 billion views
#Lowbackpain	347.2 million views
#Lowerbackpain	121.6 million views
#Physicaltherapy	1.1 billion views
#Physiotherapy	418.4 million views
#Stroke	499.1 million views
#Yoga	9.2 billion views

**TABLE 1: Comparative views on TikTok for selected health-related hashtags as of September 30, 2021**

#### *Step 2: Raw Data Set*

We initially identified a raw data set of the 200 most viewed TikTok videos by searching for #backpain in the TikTok app on September 30, 2021. These 200 TikTok videos were our raw data set, which represented approximately 47% of all TikTok views for #backpain as of September 2021 [36]. Second, we downloaded the metadata for these TikTok videos. We used the TikTok scraper and downloader tool (TSDT) version 1.4.36 in order to scrape the metadata for #backpain TikTok videos in the raw data set [37]. Data scraping is the process of importing data from a website into a spreadsheet for further analysis [38]. The TSDT allows for downloading of metadata and video content for specified number of videos for a specific TikTok hashtag. The relevant fields contained in the metadata include the number of views of each video at the specified date, length, internet address, publisher, and date of publication.

#### *Step 3: Cleansing the Raw Data to Produce the Final Data Set*

Of the 200 TikTok videos identified, 43 non-English, duplicate, and not relevant TikTok videos unrelated to back or spinal pain were excluded. The final data set consisted of 157 TikTok videos in English that were relevant to ANSBP. Relevant videos were those that featured spinal pain as the primary theme. The final data set represented approximately 46% of all TikTok videos tagged with #backpain as of September 2021.

## Research Questions

We used the final data set in order to answer four RQs.

#### *RQ1: What are the Metadata Characteristics of Videos in the Final Data Set?*

We used the metadata obtained via the TSDT to answer this question. Zheluk and Maddock used descriptive statistics to examine length of YouTube videos, the number of views, and channel names [31]. In this study, we used the following data fields: days since published to September 30, 2021, views (PlayCount), video duration, likes (DiggCount), shares, and comments. Through this approach, we were able to describe the metadata characteristics of the final data set.

#### *RQ2: What are the TikTok Creator Identities in the Final Data Set?*

We coded the 157 unique TikTok videos in the final data set according to the creator's identity. We used the same author identities as Zheluk and Maddock did in their analysis of back pain YouTube videos [31]. We used the following six creator identities: chiropractor, fitness professional, influencer, physician, physiotherapist, and other. See Table 2 for creator identity definitions. Researchers have suggested that the creator's identity contributes to user assessments of source credibility online [39].

Creator identity	Definition
Chiropractor	Self-identifies as chiropractor OR student of this discipline in TikTok video OR creator identity obtained through Internet search
Fitness	Self-identifies as fitness professional therapist in TikTok video OR creator identity obtained through Internet search
Influencer	No professional or commercial affiliation explicitly listed.
Physician	Self-identifies as medical /osteopathic physician OR student of this discipline in TikTok video OR creator identity obtained through Internet search. Note: US physicians may obtain medical registration through an osteopathic educational pathway.
Physiotherapy	Self-identifies as physiotherapist/physical therapist OR student of this discipline in TikTok video OR creator identity obtained through Internet search
Other	Commercial or other organisational affiliation listed explicitly in TikTok video OR creator identity obtained through Internet search. This includes religious healers, massage providers, yoga, sales, and education providers.

TABLE 2: Definition of creator identities

RQ3: What are the Intervention Themes in the Final Data Set?

We first coded each TikTok video according to one of three intervention themes: education, real-time exercise, or real-time treatment. See Table 3 for definitions of intervention themes. These intervention themes were used by Zheluk and Maddock to assess ALBP YouTube content [31]. Second, we analysed the three intervention themes according to creator identities. The six creator identities were: chiropractor, fitness professional, influencer, physician, physiotherapist, and other.

Intervention	Definition
Education	More than 50% (i.e., the majority of the video) is dedicated to discussion of back pain content or associated aggravating or ameliorating factors including physical and mental health considerations
Exercise	More than 50% (i.e., the majority of the video) is dedicated to real time exercise by clinician or other identity
Treatment	More than 50% (i.e., the majority of the video) is dedicated to real-time hands-on treatment by clinician or other identity on another person, that does not involve exercise or education.

TABLE 3: Definitions of intervention themes

RQ4: What are the Characteristics of the Final Data Set Based on a Reference Checklist?

We analysed the final data set based on the ALBP reference checklist originally developed for the analysis of YouTube videos by Zheluk and Maddock [31]. See Table 4 for the reference checklist codebook. The YouTube checklist was based on recommended first-line ALBP items described by Foster et al. [40]. The checklist included items that an individual patient may reasonably be expected to independently implement as part of a self-management or self-care intervention for ALBP. For the purposes of this TikTok project, we have assumed ALBP self-care guidance is also suitable for ANSBP.

ANSBP Checklist	ANSBP codebook - definitions
Acute (Suitable for acute patients) Exercise therapy [40]	YES: The exercises are of appropriate intensity and scope for recent-onset ANSBP in a person aged under 40 of average fitness and flexibility level. There are no superior exercises - yoga, pilates, and walking are all equally effective for example.  NO: The exercises are not suitable as described above.
ADL (Activities of daily living) "Advice to remain active" [40]	YES: At least ONE mention of ADL via narration, desk or visual images. This includes walking, modifying the environment, sport and recreation, modifying ADL, maintaining ADL.  NO: No mention of ADL as described above
Analgesia Superficial heat NSAIDs [40]	YES: At least one mention of: (1) OTC pharmacological analgesia OR (2) non-pharmacological self-management described in guidelines (for example NSAIDs, heat, ice, pacing, ergonomics)  NO: No mentions of pharmacological or non-pharmacological analgesia; use of spinal manipulation.
Soothing affect CBT/mindfulness-based stress reduction education [40]	YES: Is the video emotionally soothing overall? This includes education content, editing, music, encouraging fear or catastrophizing, loud or frantic narration  NO: Not soothing overall as per the description of the soothing affect as described above.
Appropriate Prognosis Education [40]	YES: Author describes: (1) Plausible prognosis consistent with ANSBP guidelines described by Foster et al. [40]. Primarily not overpromising.  NO: (1) Overpromising. Terms such as "fix", "cure", and "instant" indicate unrealistic prognosis. OR (2) No prognosis mentioned.
Red flags	YES: At least one mention of referral to mainstream medical provider (medical practitioner, physiotherapist) for formal diagnosis and advice as a cautionary principle OR Mention of differential diagnoses or symptoms including cauda equina, renal problems, abdominal aortic aneurysm, cancer, infection, and fractures.  NO: No mention of referral to mainstream medical provider (medical practitioner, physiotherapist) OR No mention of mainstream medical diagnosis for back pain

**TABLE 4: Acute non-specific back pain self-care reference checklist**  
ANSBP: acute non-specific back pain, ADL: activities of daily living

Intercoder reliability

Coding was conducted by the three authors of this study. Intercoder reliability was achieved through intercoder consensus [41,42]. Following initial coding by Author A, we conducted team-based coding with Authors B and C. We identified an initial discrepancy of 20 individual items within the 157 TikTok videos in the final data set. Following team negotiations, changes to TikTok coding and changes to the codebook were introduced. The final data set and codes represent a team consensus position. No Cohen’s Kappa or Krippendof Alpha tests were performed. In summary, by examining the characteristics of individual TikTok videos, we aimed to determine the relative concordance of TikTok videos produced by different creator identities with the consensus-based low back pain self-management guidelines.

Results

We identified clear differences based on the creator’s identity in the TikTok final data set. We found that the TikTok videos created by chiropractors were consistently among the most viewed, most commented and most shared. Conversely, chiropractic TikTok videos generally had the lowest self-care reference checklist scores relative to all other disciplines. That is, TikTok videos created by chiropractors were least concordant with the reference checklist and, thus, these were least likely to reflect scientific consensus on treating ANSBP.

Metadata characteristics of the videos in the final data set

We examined six different metadata characteristics (Table 5). We found on average (mean), chiropractic TikTok videos had the most views (4,744,164); shortest duration (19.97 seconds), were the oldest (317 days), had the most likes, the most shares, and the most comments. The least popular TikTok videos were produced by physiotherapists. Physiotherapy TikTok videos were least viewed (1,583,240), least liked, least shared, and had the fewest comments. The longest videos were created by physicians (mean of 57 seconds).

Creator identity	Days since published (Calculated November 8, 2021)	Views	Duration video in seconds	Likes	Shares	Comments
Chiropractic	317	4,744,164	19.97	393,573	17,928	2814
Fitness	226	2,936,618	20.1	369,999	24,589	2132
Influencer	230	2,097,050	25	252,543	12,245	1588
Physician	207	2,280,350	57	159,983	8222	800
Physiotherapist	216	1,583,240	34	154,097	7905	768
Other	196	1,608,473	34	165,549	6313	786.5

**TABLE 5: Characteristics of TikTok videos according to creator identities**

### TikTok creator identities in the final data set

We coded the 157 TikTok videos in the final data set into six creator identities (Table 6). Chiropractors were the most common identity creating TikTok videos in the final data set (46%; n=72), followed by fitness professionals (22%; n=34), physicians (3%; n=5), and physiotherapists (3%; n=5). In summary, the highest proportion of the final data set was created by chiropractors (Table 3).

Author identity	Number of TikTok videos	Percentage of TikTok videos
Chiropractic	72	46%
Fitness professional	34	22%
Influencer	30	19%
Physician	5	3%
Physiotherapist	5	3%
Other	11	7%
TOTAL	157	100%

**TABLE 6: Author identity in the final data set**

### Intervention themes in the final data set

We examined TikTok videos in the final data from the perspective of three types of intervention: education, exercises, or treatment (Table 7). The salient findings were: (1) videos by fitness professionals (71%; n=24) and chiropractics (63%; n=45) primarily featured exercise content; these TikTok videos generally offered a single exercise, with no information about frequency or duration, (2) videos by influencers primarily featured educational content (73%; n=22); these TikTok videos often featured suggestions about managing ANSBP throughout activities of daily living. The remaining creator identities were represented by a small number of TikTok videos, in which we could not identify a specific theme.

Author category	1. Education (n=42)	2. Exercise (n=83)	3. Treatment (n=32)	Total (n=157)
Chiropractic	n=7 (10%)	n=45 (63%)	n=20 (28%)	n=72 (100%)
Fitness professional	n=10 (29%)	n=24 (71%)	n=0 (0%)	n=34 (100%)
Influencer	n=22 (73%)	n=5 (17%)	n=3 (10%)	n=30 (100%)
Physician	n=1 (20%)	n=2 (40%)	n=2 (40%)	n=5 (100%)
Physiotherapist	n=1 (20%)	n=3 (60%)	n=1 (20%)	n=5 (100%)
Other	n=1 (9%)	n=4 (36%)	n=6 (55%)	n=11 (100%)

**TABLE 7: Intervention themes in the final data set**

### Characteristics of the final data set based on a reference checklist

We analysed the final data set based on the reference checklist. We found differences in the self-care advice contained in TikTok videos based on creator identity (Table 8). Most notably, few videos under any creator identity carried any information about when to visit a medical professional, or red flags indicating potentially serious underlying pathology. Other salient findings were: (1) physiotherapy TikTok videos were most suitable for individuals in acute pain (100%; n=5), most frequently discussed analgesia (60%; n=3), and most frequently provided an appropriate prognosis (60%; n=3); however, the overall number of physiotherapist TikTok videos was small, and this result should be interpreted with caution, and (2) influencer created TikTok videos focused on personal experiences of pain resulting from activities of daily living (70%; n=21) and were most likely to feature an affective dimension (27%; n=8) than other creator identities. Finally, the data in Table 8 is nominal data and is not suitable for statistical analysis.

Creator identity	1. Acute (n=104)	2. ADL (n=49)	3. Analgesia (n=17)	4. Red Flag (n=3)	5. Affect (n=10)	6. Appropriate prognosis (n=19)
Chiropractic	n=45 (63%)	n=14 (19%)	n=4 (6%)	n=2 (3%)	n=1 (1%)	n=4 (7%)
Fitness professional	n=17 (50%)	n=11 (32%)	n=2 (6%)	n=1 (3%)	n=0 (0%)	n=9 (26%)
Influencer	n=22 (73%)	n=21 (70%)	n=7 (23%)	n=0 (0%)	n=8 (27%)	n=3 (10%)
Physician	n=4 (40%)	n=1 (20%)	n=1 (20%)	n=0 (0%)	n=0 (0%)	n=0 (0%)
Physiotherapist	n=5 (100%)	n=0 (0%)	n=3 (60%)	n=0 (0%)	n=1 (20%)	n=3 (60%)
Other	n=10 (91%)	n=2 (18%)	n=0 (0%)	n=0 (0%)	n=0 (0%)	n=0 (0%)

**TABLE 8: Reference checklist results**

## Discussion

TikTok is an increasingly popular medium for disseminating short health messages. This exploratory study aimed to evaluate the scope of ANSBP content available on TikTok as of September 2021. The main cohort using TikTok is young and at risk of ANSBP. However, we suggest that the messages reaching young TikTok users overall do not generally reflect the self-care advice described by Foster et al. [35,40]. We found that methods used for the analysis of YouTube videos may also be adapted to the analysis of TikTok videos.

### Metadata

The metadata for the final data set revealed that chiropractic TikTok videos were consistently the most viewed, commented, and shared in our data set. Zheluk and Maddock (also studying ANSBP) similarly found chiropractic videos were consistently the most commonly viewed and most commented videos on YouTube [31]. We did not identify peer-reviewed literature describing the popularity of chiropractic on social media. However, we identified grey literature describing the use of TikTok, YouTube, and Instagram as an important marketing channel by the chiropractic profession [43]. Specifically, this literature describes the focus on cracking sounds associated with spinal manipulation as a form of Autonomous Sensory Meridian Response (ASMR). These ASMR videos are explicitly directed at marketing the chiropractic profession



[44]. ASMR refers to the sensations elicited in response to a range of sounds including whispering, spinal manipulation, and eating [45]. Further, chiropractic TikTok videos frequently feature young female patients wearing tight or limited clothing. See for example the TikTok video created by chiropractor Dr Alex [46]. In summary, this suggests TikTok is being actively used by the broader chiropractic profession as a marketing channel.

## Creator identities

Chiropractors were the main creator identity identified in our study. Chiropractic TikTok videos in our data set were the oldest of all identities, with an average (mean) of 316 days since publication. This suggests chiropractors have been early adopters of TikTok as a medium. Chiropractic TikTok videos were also the most popular. The higher average age of chiropractic TikTok videos may partially account for their higher view counts. Zheluk and Maddock similarly found a high number of ANSBP videos on YouTube were created by chiropractors [31]. Further, in comparison with YouTube, we found a near absence of physiotherapists (3%; n=5), physicians (3%; n=5), and no videos from yoga instructors (0%) in the final data set. The absence of physiotherapists, physicians, and yoga instructors in #backpain TikTok videos is noteworthy. Zheluk and Maddock suggested video content created by these three disciplines was more consistently aligned with ALBP self-management guidelines than those created by chiropractors or fitness professionals.

## Intervention themes

We examined education, exercise, and treatment as potential intervention themes. The most common intervention theme in our data set was exercise. The limited information about duration, frequency, progression of exercises, and precautions suggest that individuals using this information may be more likely to gain little benefit or risk further pain and injury from conducting these exercises. The short mean duration of TikTok videos in our dataset (e.g., 19.97 seconds for chiropractic videos) compared to YouTube ALBP videos may influence content considerations. TikTok videos in our final dataset frequently featured a single activity. Activities included an exercise, a discussion of pain, or chiropractic manipulation. By contrast, YouTube videos generally offer a slower-paced and more comprehensive examination of low back pain topics. Influencers describing pain and activities of daily living were another notable finding. We coded these influencer TikTok videos as education.

## Reference checklist

Overall, we found limited concordance between popular chiropractic and fitness TikTok videos and the ANSBP reference checklist. Most notably, few videos carried any information about when to visit a medical professional or any other precautionary information. This suggests that by excluding disclaimer information, the short duration of TikTok videos may expose creators to some medicolegal risk. Most identities similarly demonstrated limited concordance with the reference checklist. However, TikTok offers creators the option of creating three and five-minute videos. We found some of the longer videos offered greater scope for presenting content similar to YouTube. This suggests that TikTok has the potential to offer guideline-concordant content and more complex advice. Conversely, these longer videos may be less appealing to TikTok audiences [47].

## Translation of methods from YouTube to TikTok

We believe that methods translated from YouTube, as described in this paper, may also be appropriate for the analysis of ANSBP video content on TikTok. Specifically, the methods that may be applied to TikTok videos include: (1) the analysis by creator identity to analyse TikTok metadata. The constantly changing popularity of individual TikTok videos suggests individual videos may not offer the optimal unit of analysis. We suggest an analysis of data sets aggregated by creator identity may provide a more consistent approach to the analysis of broader trends in TikTok health information; (2) The analysis of TikTok videos by intervention themes such as education, treatment, and exercise, in combination with creator identity and metadata appears to offer insights into the scope of health information available beyond simple description. These themes should be grounded themes, i.e., they should be based on analysis of the specific data set; and (3) the use of a reference checklist to assess TikTok videos against consensus guidelines as an approach to evaluating ANSBP content across social media.

## Limitations

This paper had several limitations. First, we did not examine the literature on digital health interventions. This study examined the scope of ANSBP TikTok videos available in 2021. By conducting this study we also aimed to extend the methods used for the analysis of TikTok videos. Second, we did not examine TikTok videos from the perspective of misinformation. Suarez and colleagues define health misinformation as a “health-related claim that is based on anecdotal evidence, false, or misleading owing to the lack of existing scientific knowledge” [48]. In this study, we identified the use of misleading TikTok videos for marketing purposes by chiropractors. We suggest these TikTok videos appeared motivated by financial gain rather than lack of scientific knowledge and are thus not consistent with this definition of health disinformation. While the presentation of misleading ANSBP information on TikTok merits consideration, this is beyond the scope of this study.

## Further research

In this paper, we made limited comparisons between YouTube and TikTok from the perspective of translating methods for analysing videos across social media platforms. We believe further research that examines the optimal use of the unique features of each popular social media platform by various health disciplines is merited.

Second, there appear to be several opportunities for health professionals seeking to use TikTok for the dissemination of ANSBP information. We identified a potential demand for information about ADL based on TikTok videos produced by influencers. We suggest that the limited presence of mainstream health professionals such as physicians and physiotherapists offer opportunities to reach younger age cohorts with health messages about ANSBP and other health conditions. The use of TikTok by younger age cohorts to self-care and self-manage ANSBP thus also merits further research.

Third, we believe chiropractic TikTok videos merit further research. Chiropractic TikTok videos featuring young women and ASMR represent a novel health marketing phenomenon. We found TikTok videos created by chiropractors to be consistently rated poorly by coders against the ANSBP reference checklist. This marketing phenomenon may be influencing future expectations of what constitutes appropriate ANSBP care among younger TikTok users.

Fourth, content analysis cannot examine the actual impact of TikTok videos on individual decision making. Future research may establish this causal relationship. In summary, TikTok is a popular social medium that is under-researched. This paper contributes to the TikTok methods literature and to the understanding of the scope of ANSBP information available on TikTok.

## Conclusions

TikTok is a popular social media channel among young people and it is plausible that it may influence decision making about what constitutes appropriate ANSBP self-care in young people. However, we found that most messages reaching younger people about ANSBP self-care do not reflect evidence-informed guidelines. The most viewed TikTok videos about ANSBP are not produced by mainstream health professionals. There is scope for mainstream health professionals to provide evidence-informed self-management and self-care content for ANSBP. This requires that mainstream health professionals adopt creative approaches to transmit their ideas effectively via the novel TikTok social media platform.

## Appendices

NUMBER	CHANNEL	URL	DISCIPLINE
	Chiropractic TikToks		
1	□TheOsteoDr□	<a href="https://www.tiktok.com/@theosteodr/video/6856464078626360582">https://www.tiktok.com/@theosteodr/video/6856464078626360582</a>	Chiropractor
2	Aaron Kubal, DC	<a href="https://www.tiktok.com/@aaron_kubaldc/video/6947867891475811590">https://www.tiktok.com/@aaron_kubaldc/video/6947867891475811590</a>	Chiropractor
3	Aliya Visram	<a href="https://www.tiktok.com/@draliyavisram/video/6914851658455436550">https://www.tiktok.com/@draliyavisram/video/6914851658455436550</a>	Chiropractor
4	BethaltoBackDoc	<a href="https://www.tiktok.com/@dr.backcrack/video/6938506940486110469">https://www.tiktok.com/@dr.backcrack/video/6938506940486110469</a>	Chiropractor
5	Daniel DeLucchi DC	<a href="https://www.tiktok.com/@chiroseattle/video/6949706466429275398">https://www.tiktok.com/@chiroseattle/video/6949706466429275398</a>	Chiropractor
6	Daniel DeLucchi DC	<a href="https://www.tiktok.com/@chiroseattle/video/6884378171639106822">https://www.tiktok.com/@chiroseattle/video/6884378171639106822</a>	Chiropractor
7	Daniel DeLucchi DC	<a href="https://www.tiktok.com/@chiroseattle/video/6903914794022128902">https://www.tiktok.com/@chiroseattle/video/6903914794022128902</a>	Chiropractor
8	Daniel DeLucchi DC	<a href="https://www.tiktok.com/@chiroseattle/video/6950423971397455109">https://www.tiktok.com/@chiroseattle/video/6950423971397455109</a>	Chiropractor
9	Daniel DeLucchi DC	<a href="https://www.tiktok.com/@chiroseattle/video/6958219855187217670">https://www.tiktok.com/@chiroseattle/video/6958219855187217670</a>	Chiropractor
10	domenic	<a href="https://www.tiktok.com/@domeniciniguez/video/6973420000283479301">https://www.tiktok.com/@domeniciniguez/video/6973420000283479301</a>	Chiropractor
11	Dr Ali Elahi	<a href="https://www.tiktok.com/@drelahi/video/6984174061165333766">https://www.tiktok.com/@drelahi/video/6984174061165333766</a>	Chiropractor
12	Dr Donovan Smolich	<a href="https://www.tiktok.com/@drdonovan/video/6939957801770880262">https://www.tiktok.com/@drdonovan/video/6939957801770880262</a>	Chiropractor
13	Dr Matt Pennell	<a href="https://www.tiktok.com/@drmattpennell/video/6770810539246472453">https://www.tiktok.com/@drmattpennell/video/6770810539246472453</a>	Chiropractor
14	Dr. Alex	<a href="https://www.tiktok.com/@occhiropractor/video/6825697649841245445">https://www.tiktok.com/@occhiropractor/video/6825697649841245445</a>	Chiropractor
15	Dr. Alex Tauberg DC CSCS	<a href="https://www.tiktok.com/@thepittsburghchiro/video/6826723541837270278">https://www.tiktok.com/@thepittsburghchiro/video/6826723541837270278</a>	Chiropractor
16	Dr. Alyssa Hickey	<a href="https://www.tiktok.com/@dr.alysshanickey/video/6816490019193359622">https://www.tiktok.com/@dr.alysshanickey/video/6816490019193359622</a>	Chiropractor

17	Dr. Anthony Vuckovich	<a href="https://www.tiktok.com/@victorychiropractic/video/6924078421848968449">https://www.tiktok.com/@victorychiropractic/video/6924078421848968449</a>	Chiropractor
18	Dr. Ben	<a href="https://www.tiktok.com/@drbenhorning/video/6880650101769915653">https://www.tiktok.com/@drbenhorning/video/6880650101769915653</a>	Chiropractor
19	Dr. Brenda Mondragon	<a href="https://www.tiktok.com/@brenda_mondragon/video/6917670476877679877">https://www.tiktok.com/@brenda_mondragon/video/6917670476877679877</a>	Chiropractor
20	Dr. Brenda Mondragon	<a href="https://www.tiktok.com/@brenda_mondragon/video/6992283351545679110">https://www.tiktok.com/@brenda_mondragon/video/6992283351545679110</a>	Chiropractor
21	Dr. Brenda Mondragon	<a href="https://www.tiktok.com/@brenda_mondragon/video/6921826675038620934">https://www.tiktok.com/@brenda_mondragon/video/6921826675038620934</a>	Chiropractor
22	Dr. Brian Meenan DC	<a href="https://www.tiktok.com/@pittsburgh_chiropractor/video/6814477599268490502">https://www.tiktok.com/@pittsburgh_chiropractor/video/6814477599268490502</a>	Chiropractor
23	Dr. Brian Meenan DC	<a href="https://www.tiktok.com/@pittsburgh_chiropractor/video/6816849134792854789">https://www.tiktok.com/@pittsburgh_chiropractor/video/6816849134792854789</a>	Chiropractor
24	Dr. Chris Cooper	<a href="https://www.tiktok.com/@drchriscooper/video/6748845723309067526">https://www.tiktok.com/@drchriscooper/video/6748845723309067526</a>	Chiropractor
25	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6818332046809746693">https://www.tiktok.com/@dr.cracks/video/6818332046809746693</a>	Chiropractor
26	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6919575028187090181">https://www.tiktok.com/@dr.cracks/video/6919575028187090181</a>	Chiropractor
27	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6840091379847138565">https://www.tiktok.com/@dr.cracks/video/6840091379847138565</a>	Chiropractor
28	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6865288520425114885">https://www.tiktok.com/@dr.cracks/video/6865288520425114885</a>	Chiropractor
29	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6915157542670716165">https://www.tiktok.com/@dr.cracks/video/6915157542670716165</a>	Chiropractor
30	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6868253899791289606">https://www.tiktok.com/@dr.cracks/video/6868253899791289606</a>	Chiropractor
31	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6847470009623547142">https://www.tiktok.com/@dr.cracks/video/6847470009623547142</a>	Chiropractor
32	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/7001186897951345925">https://www.tiktok.com/@dr.cracks/video/7001186897951345925</a>	Chiropractor
33	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6821539509755235590">https://www.tiktok.com/@dr.cracks/video/6821539509755235590</a>	Chiropractor
34	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6830510490297306373">https://www.tiktok.com/@dr.cracks/video/6830510490297306373</a>	Chiropractor
35	Dr. Cracks	<a href="https://www.tiktok.com/@dr.cracks/video/6826857573820501253">https://www.tiktok.com/@dr.cracks/video/6826857573820501253</a>	Chiropractor
36	Dr. Grant Elliott	<a href="https://www.tiktok.com/@rehabfix/video/6958132865330711814">https://www.tiktok.com/@rehabfix/video/6958132865330711814</a>	Chiropractor
37	Dr. Jimmy Sayegh	<a href="https://www.tiktok.com/@kingofcracks/video/6916163209174977798">https://www.tiktok.com/@kingofcracks/video/6916163209174977798</a>	Chiropractor
38	Dr. Jimmy Sayegh	<a href="https://www.tiktok.com/@kingofcracks/video/6850477410568162566">https://www.tiktok.com/@kingofcracks/video/6850477410568162566</a>	Chiropractor
39	Dr. Jimmy Sayegh	<a href="https://www.tiktok.com/@kingofcracks/video/6915050096476294406">https://www.tiktok.com/@kingofcracks/video/6915050096476294406</a>	Chiropractor
40	Dr. Jimmy Sayegh	<a href="https://www.tiktok.com/@kingofcracks/video/6944357238576336134">https://www.tiktok.com/@kingofcracks/video/6944357238576336134</a>	Chiropractor
41	Dr. Jimmy Sayegh	<a href="https://www.tiktok.com/@kingofcracks/video/6858026719215947013">https://www.tiktok.com/@kingofcracks/video/6858026719215947013</a>	Chiropractor
42	Dr. Jimmy Sayegh	<a href="https://www.tiktok.com/@kingofcracks/video/6982574991497809157">https://www.tiktok.com/@kingofcracks/video/6982574991497809157</a>	Chiropractor
43	Dr. Kyle Naylor	<a href="https://www.tiktok.com/@drkylenaylor/video/6856919824900099334">https://www.tiktok.com/@drkylenaylor/video/6856919824900099334</a>	Chiropractor
44	Dr. Mike	<a href="https://www.tiktok.com/@drmichaelvan/video/6984856294297554181">https://www.tiktok.com/@drmichaelvan/video/6984856294297554181</a>	Chiropractor
45	Dr. Patrick Karamkhodian, DC	<a href="https://www.tiktok.com/@doctorkaramkhodian/video/6929923797919223045">https://www.tiktok.com/@doctorkaramkhodian/video/6929923797919223045</a>	Chiropractor
46	Dr. Rashad Trabulsi	<a href="https://www.tiktok.com/@dr.rashad.trabulsi/video/6956288693585939714">https://www.tiktok.com/@dr.rashad.trabulsi/video/6956288693585939714</a>	Chiropractor
47	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6862145627661290758">https://www.tiktok.com/@dr.remix/video/6862145627661290758</a>	Chiropractor
48	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6905199614635347205">https://www.tiktok.com/@dr.remix/video/6905199614635347205</a>	Chiropractor
49	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6824603797994736902">https://www.tiktok.com/@dr.remix/video/6824603797994736902</a>	Chiropractor
50	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6954533716525911302">https://www.tiktok.com/@dr.remix/video/6954533716525911302</a>	Chiropractor
51	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6923413529647172870">https://www.tiktok.com/@dr.remix/video/6923413529647172870</a>	Chiropractor
52	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6953806031390625029">https://www.tiktok.com/@dr.remix/video/6953806031390625029</a>	Chiropractor
53	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6850611478697872646">https://www.tiktok.com/@dr.remix/video/6850611478697872646</a>	Chiropractor
54	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6995376258909605125">https://www.tiktok.com/@dr.remix/video/6995376258909605125</a>	Chiropractor
55	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6946368828314094854">https://www.tiktok.com/@dr.remix/video/6946368828314094854</a>	Chiropractor
56	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6980145907052317958">https://www.tiktok.com/@dr.remix/video/6980145907052317958</a>	Chiropractor

57	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6977544868855893253">https://www.tiktok.com/@dr.remix/video/6977544868855893253</a>	Chiropractor
58	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6940814731645160710">https://www.tiktok.com/@dr.remix/video/6940814731645160710</a>	Chiropractor
59	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6828382067546492166">https://www.tiktok.com/@dr.remix/video/6828382067546492166</a>	Chiropractor
60	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6872201834849766662">https://www.tiktok.com/@dr.remix/video/6872201834849766662</a>	Chiropractor
61	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6982391971998469381">https://www.tiktok.com/@dr.remix/video/6982391971998469381</a>	Chiropractor
62	Dr. Remix	<a href="https://www.tiktok.com/@dr.remix/video/6823143616030969094">https://www.tiktok.com/@dr.remix/video/6823143616030969094</a>	Chiropractor
63	DrJustinDC	<a href="https://www.tiktok.com/@weberspineandjoint/video/6840112110232521989">https://www.tiktok.com/@weberspineandjoint/video/6840112110232521989</a>	Chiropractor
64	Efecto Bienestar Quiropráctica	<a href="https://www.tiktok.com/@efecto.bienestar.quir/video/6856437456120679686">https://www.tiktok.com/@efecto.bienestar.quir/video/6856437456120679686</a>	Chiropractor
65	Erdal Arsu	<a href="https://www.tiktok.com/@erdalarsu/video/6955775187526765829">https://www.tiktok.com/@erdalarsu/video/6955775187526765829</a>	Chiropractor
66	Josh Adams	<a href="https://www.tiktok.com/@drjoshadams/video/6992338421100383494">https://www.tiktok.com/@drjoshadams/video/6992338421100383494</a>	Chiropractor
67	Manhattan Wellness Group	<a href="https://www.tiktok.com/@manhattanwellnessgroup/video/6950357114716048641">https://www.tiktok.com/@manhattanwellnessgroup/video/6950357114716048641</a>	Chiropractor
68	Michael Oakson	<a href="https://www.tiktok.com/@michael.oakson/video/6843217189844045061">https://www.tiktok.com/@michael.oakson/video/6843217189844045061</a>	Chiropractor
69	Michael Oakson	<a href="https://www.tiktok.com/@michael.oakson/video/6871321368173104389">https://www.tiktok.com/@michael.oakson/video/6871321368173104389</a>	Chiropractor
70	Michael Oakson	<a href="https://www.tiktok.com/@michael.oakson/video/6873586830076300550">https://www.tiktok.com/@michael.oakson/video/6873586830076300550</a>	Chiropractor
71	Norwood Chiropractic	<a href="https://www.tiktok.com/@norwood.chiro/video/6974726857698708742">https://www.tiktok.com/@norwood.chiro/video/6974726857698708742</a>	Chiropractor
72	Root Cause Medical Clinic	<a href="https://www.tiktok.com/@rootcausemedicalclinic/video/6927734829375098118">https://www.tiktok.com/@rootcausemedicalclinic/video/6927734829375098118</a>	Chiropractor
FITNESS TIKTOKS			
1	Jake Abela	<a href="https://www.tiktok.com/@jake_abela/video/6980612856567926018">https://www.tiktok.com/@jake_abela/video/6980612856567926018</a>	Fitness
2	emma	<a href="https://www.tiktok.com/@endometriosisem/video/6963355040425741574">https://www.tiktok.com/@endometriosisem/video/6963355040425741574</a>	Firtness
3	Stella Yang	<a href="https://www.tiktok.com/@stellatoday/video/6891820204439964929">https://www.tiktok.com/@stellatoday/video/6891820204439964929</a>	Fitness
4	Arun Gray	<a href="https://www.tiktok.com/@aginjuryrehab/video/6893188478402612482">https://www.tiktok.com/@aginjuryrehab/video/6893188478402612482</a>	Fitness
5	Beef patty	<a href="https://www.tiktok.com/@leanbeefpatty/video/6959544199758859526">https://www.tiktok.com/@leanbeefpatty/video/6959544199758859526</a>	Fitness
6	Bones to Bulk	<a href="https://www.tiktok.com/@bonestobulk/video/6771573634193476870">https://www.tiktok.com/@bonestobulk/video/6771573634193476870</a>	Fitness
7	cassey	<a href="https://www.tiktok.com/@blogilates/video/6884603363997043974">https://www.tiktok.com/@blogilates/video/6884603363997043974</a>	Fitness
8	exercise & food	<a href="https://www.tiktok.com/@beautifuldrinks/video/6951328015607532806">https://www.tiktok.com/@beautifuldrinks/video/6951328015607532806</a>	Fitness
9	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6978273324564499718">https://www.tiktok.com/@fitness_yogibeast_v2/video/6978273324564499718</a>	Fitness
10	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6926336472090037510">https://www.tiktok.com/@fitness_yogibeast_v2/video/6926336472090037510</a>	Fitness
11	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6977902577090399493">https://www.tiktok.com/@fitness_yogibeast_v2/video/6977902577090399493</a>	Fitness
12	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6944133830341184774">https://www.tiktok.com/@fitness_yogibeast_v2/video/6944133830341184774</a>	Fitness
13	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6901844162648263942">https://www.tiktok.com/@fitness_yogibeast_v2/video/6901844162648263942</a>	Fitness
14	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6988293989984144645">https://www.tiktok.com/@fitness_yogibeast_v2/video/6988293989984144645</a>	Fitness
15	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6927078647601925382">https://www.tiktok.com/@fitness_yogibeast_v2/video/6927078647601925382</a>	Fitness
16	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6964919544225762566">https://www.tiktok.com/@fitness_yogibeast_v2/video/6964919544225762566</a>	Fitness
17	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6977532070344084742">https://www.tiktok.com/@fitness_yogibeast_v2/video/6977532070344084742</a>	Fitness
18	Fitness At Home YogibeastV2 	<a href="https://www.tiktok.com/@fitness_yogibeast_v2/video/6918172625617341702">https://www.tiktok.com/@fitness_yogibeast_v2/video/6918172625617341702</a>	Fitness
19	Hybrid Calisthenics	<a href="https://www.tiktok.com/@hybridcalisthenics/video/6865113800677330182">https://www.tiktok.com/@hybridcalisthenics/video/6865113800677330182</a>	Fitness
20	Justin Agustin	<a href="https://www.tiktok.com/@justin_agustin/video/6855686911722310917">https://www.tiktok.com/@justin_agustin/video/6855686911722310917</a>	fitness
21	Meg Iwama   Pain free fam 	<a href="https://www.tiktok.com/@megumi.iwama/video/6931168392258882822">https://www.tiktok.com/@megumi.iwama/video/6931168392258882822</a>	Fitness
22	Meg Iwama   Pain free fam 	<a href="https://www.tiktok.com/@megumi.iwama/video/6917656170513616134">https://www.tiktok.com/@megumi.iwama/video/6917656170513616134</a>	Fitness

23	Mike Bosh PAS	<a href="https://www.tiktok.com/@postureguy/video/6938237139683462406">https://www.tiktok.com/@postureguy/video/6938237139683462406</a>	Fitness
24	MovementbyDavid	<a href="https://www.tiktok.com/@movementbydavid/video/7000383385109531909">https://www.tiktok.com/@movementbydavid/video/7000383385109531909</a>	Fitness
25	MV Fitness	<a href="https://www.tiktok.com/@mv_fitness_training/video/6975620029022784774">https://www.tiktok.com/@mv_fitness_training/video/6975620029022784774</a>	Fitness
26	MV Fitness	<a href="https://www.tiktok.com/@mv_fitness_training/video/6975278978890337542">https://www.tiktok.com/@mv_fitness_training/video/6975278978890337542</a>	Fitness
27	MV Fitness	<a href="https://www.tiktok.com/@mv_fitness_training/video/6991274717499886853">https://www.tiktok.com/@mv_fitness_training/video/6991274717499886853</a>	Fitness
28	MV Fitness	<a href="https://www.tiktok.com/@mv_fitness_training/video/6993141618505207045">https://www.tiktok.com/@mv_fitness_training/video/6993141618505207045</a>	Fitness
29	MV Fitness	<a href="https://www.tiktok.com/@mv_fitness_training/video/6976296377559141637">https://www.tiktok.com/@mv_fitness_training/video/6976296377559141637</a>	Fitness
30	Stella Yang	<a href="https://www.tiktok.com/@stellatoday/video/6902447958776646914">https://www.tiktok.com/@stellatoday/video/6902447958776646914</a>	Fitness
31	Stella Yang	<a href="https://www.tiktok.com/@stellatoday/video/6904314386177903874">https://www.tiktok.com/@stellatoday/video/6904314386177903874</a>	Fitness
32	Stella Yang	<a href="https://www.tiktok.com/@stellatoday/video/6902055915327950082">https://www.tiktok.com/@stellatoday/video/6902055915327950082</a>	Fitness
33	stormiebrooks_	<a href="https://www.tiktok.com/@stormiebrooks_/video/6934839611252395269">https://www.tiktok.com/@stormiebrooks_/video/6934839611252395269</a>	Fitness
34	Tanish Choudhary	<a href="https://www.tiktok.com/@tanish.choudhary_/video/6855364414816750854">https://www.tiktok.com/@tanish.choudhary_/video/6855364414816750854</a>	Fitness
	Influencer TikToks		
1	Collin	<a href="https://www.tiktok.com/@collinurmom/video/6904448761968266502">https://www.tiktok.com/@collinurmom/video/6904448761968266502</a>	Influencer
2	□Ria□	<a href="https://www.tiktok.com/@__ria9_/video/6884198026718498050">https://www.tiktok.com/@__ria9_/video/6884198026718498050</a>	Influencer
3	Abbie Johnson	<a href="https://www.tiktok.com/@beanie_333/video/7004616446831594757">https://www.tiktok.com/@beanie_333/video/7004616446831594757</a>	Influencer
4	aileen <33	<a href="https://www.tiktok.com/@aileen.desireyyy/video/6991338920109821190">https://www.tiktok.com/@aileen.desireyyy/video/6991338920109821190</a>	Influencer
5	AirwreckEye	<a href="https://www.tiktok.com/@airwreckeye/video/6851364197133978886">https://www.tiktok.com/@airwreckeye/video/6851364197133978886</a>	Influencer
6	angela	<a href="https://www.tiktok.com/@angelarobin99/video/6977188309814545670">https://www.tiktok.com/@angelarobin99/video/6977188309814545670</a>	Influencer
7	baileybitch	<a href="https://www.tiktok.com/@_kitty_hello_/video/6965727976973487366">https://www.tiktok.com/@_kitty_hello_/video/6965727976973487366</a>	Influencer
8	Christian Romo	<a href="https://www.tiktok.com/@iamchristianromo/video/6920015306438020358">https://www.tiktok.com/@iamchristianromo/video/6920015306438020358</a>	Influencer
9	Conscious Mind ®	<a href="https://www.tiktok.com/@consciousmind_/video/6984554482185014534">https://www.tiktok.com/@consciousmind_/video/6984554482185014534</a>	Influencer
10	drayton	<a href="https://www.tiktok.com/@draytonpeterson/video/6918213013526891782">https://www.tiktok.com/@draytonpeterson/video/6918213013526891782</a>	Influencer
11	Emily	<a href="https://www.tiktok.com/@living.withem/video/6978137923854060806">https://www.tiktok.com/@living.withem/video/6978137923854060806</a>	Influencer
12	Erica□	<a href="https://www.tiktok.com/@am.ericaxo/video/6806751399364381957">https://www.tiktok.com/@am.ericaxo/video/6806751399364381957</a>	Influencer
13	Gary Vaynerchuk	<a href="https://www.tiktok.com/@garyvee/video/6758233472445287686">https://www.tiktok.com/@garyvee/video/6758233472445287686</a>	Influencer
14	gracie o	<a href="https://www.tiktok.com/@gracieeeeo/video/6841373190736841990">https://www.tiktok.com/@gracieeeeo/video/6841373190736841990</a>	Influencer
15	Juwan Gutierrez	<a href="https://www.tiktok.com/@misocolorful/video/6760434395863125254">https://www.tiktok.com/@misocolorful/video/6760434395863125254</a>	Influencer
16	Karissa Morman	<a href="https://www.tiktok.com/@karissamorman/video/6994530898175708422">https://www.tiktok.com/@karissamorman/video/6994530898175708422</a>	Influencer
17	karol	<a href="https://www.tiktok.com/@karolscorner/video/7001961826594360582">https://www.tiktok.com/@karolscorner/video/7001961826594360582</a>	Influencer
18	Mai	<a href="https://www.tiktok.com/@maiifinds/video/6968604276075564294">https://www.tiktok.com/@maiifinds/video/6968604276075564294</a>	Influencer
19	malonesedinburgh	<a href="https://www.tiktok.com/@malonesedinburgh/video/6993398963571395846">https://www.tiktok.com/@malonesedinburgh/video/6993398963571395846</a>	Influencer
20	MEL	<a href="https://www.tiktok.com/@mellyd8845/video/6963394207671274757">https://www.tiktok.com/@mellyd8845/video/6963394207671274757</a>	Influencer
21	Rock Beef	<a href="https://www.tiktok.com/@bowenrocky/video/6809482971410681094">https://www.tiktok.com/@bowenrocky/video/6809482971410681094</a>	Influencer
22	Rosalie	<a href="https://www.tiktok.com/@rosaliebodyworks/video/6976405708065557765">https://www.tiktok.com/@rosaliebodyworks/video/6976405708065557765</a>	Influencer
23	Sarah Spikeston	<a href="https://www.tiktok.com/@sarahspikeston/video/6983666941063924997">https://www.tiktok.com/@sarahspikeston/video/6983666941063924997</a>	Influencer
24	The Collective	<a href="https://www.tiktok.com/@thecollectiveca/video/7000222327539535109">https://www.tiktok.com/@thecollectiveca/video/7000222327539535109</a>	Influencer
25	The Man	<a href="https://www.tiktok.com/@why_does_this_not_work/video/6946692100016622853">https://www.tiktok.com/@why_does_this_not_work/video/6946692100016622853</a>	Influencer
26	Tik Toker	<a href="https://www.tiktok.com/@donkey_meat/video/6992224622183828741">https://www.tiktok.com/@donkey_meat/video/6992224622183828741</a>	Influencer
27	veronica	<a href="https://www.tiktok.com/@veronicagershonn/video/6970983618449526017">https://www.tiktok.com/@veronicagershonn/video/6970983618449526017</a>	Influencer

28	Connor DeWolfe	<a href="https://www.tiktok.com/@connordewolfe/video/6962726595589098757">https://www.tiktok.com/@connordewolfe/video/6962726595589098757</a>	Influencer
29	Kim Kine	<a href="https://www.tiktok.com/@kim_kine/video/6908571880819625218">https://www.tiktok.com/@kim_kine/video/6908571880819625218</a>	Influencer
30	Stacey Green	<a href="https://www.tiktok.com/@staceygreenliving/video/6898779478776974594">https://www.tiktok.com/@staceygreenliving/video/6898779478776974594</a>	Influencer
Physician TikTok			
1	Dr. Michelle G.	<a href="https://www.tiktok.com/@dr.mgmd/video/6831365039916649733">https://www.tiktok.com/@dr.mgmd/video/6831365039916649733</a>	Physician
2	BT Osteopathy	<a href="https://www.tiktok.com/@btosteopathy/video/6960850821437295877">https://www.tiktok.com/@btosteopathy/video/6960850821437295877</a>	Physician
3	BT Osteopathy	<a href="https://www.tiktok.com/@btosteopathy/video/6987543766097808645">https://www.tiktok.com/@btosteopathy/video/6987543766097808645</a>	Physician
4	Stephanie Montrose	<a href="https://www.tiktok.com/@stephaniemontrose/video/6984726411055500550">https://www.tiktok.com/@stephaniemontrose/video/6984726411055500550</a>	Physician
5	Stephanie Montrose	<a href="https://www.tiktok.com/@stephaniemontrose/video/6975328448193531142">https://www.tiktok.com/@stephaniemontrose/video/6975328448193531142</a>	Physician
Physiotherapy TikTok			
1	□□*Clayton Dir PT, DPT □	<a href="https://www.tiktok.com/@tiktok_physio/video/6959613057517489414">https://www.tiktok.com/@tiktok_physio/video/6959613057517489414</a>	Physiotherapy
2	Dr. Dan, DPT	<a href="https://www.tiktok.com/@dr.dan_dpt/video/6831534268599078149">https://www.tiktok.com/@dr.dan_dpt/video/6831534268599078149</a>	Physiotherapy
3	Mobility MedClinic Inc	<a href="https://www.tiktok.com/@mobilitymedclinic/video/7004090059628547334">https://www.tiktok.com/@mobilitymedclinic/video/7004090059628547334</a>	Physiotherapy
4	□□*Clayton Dir PT, DPT □	<a href="https://www.tiktok.com/@tiktok_physio/video/6952959974720965893">https://www.tiktok.com/@tiktok_physio/video/6952959974720965893</a>	Physiotherapy
5	Hulst Jepsen Physical Therapy	<a href="https://www.tiktok.com/@hulstjepsenpt/video/7001110734247628037">https://www.tiktok.com/@hulstjepsenpt/video/7001110734247628037</a>	Physiotherapy
Other TikTok			
1	Tom Loud	<a href="https://www.tiktok.com/@tom.loud/video/6822092270725025029">https://www.tiktok.com/@tom.loud/video/6822092270725025029</a>	Other
2	MediRestore	<a href="https://www.tiktok.com/@medirestore/video/6937474125283773701">https://www.tiktok.com/@medirestore/video/6937474125283773701</a>	Other
3	Sleekform Kneeling Chairs	<a href="https://www.tiktok.com/@sleekform/video/7003459089007267078">https://www.tiktok.com/@sleekform/video/7003459089007267078</a>	Other
4	Sleekform Kneeling Chairs	<a href="https://www.tiktok.com/@sleekform/video/7003741779656838406">https://www.tiktok.com/@sleekform/video/7003741779656838406</a>	Other
5	Greg Gyuldemirian	<a href="https://www.tiktok.com/@greggyuldemirian/video/6885890985876933893">https://www.tiktok.com/@greggyuldemirian/video/6885890985876933893</a>	Other
6	Moore Wellness	<a href="https://www.tiktok.com/@moorewellness/video/6980850569615248645">https://www.tiktok.com/@moorewellness/video/6980850569615248645</a>	Other
7	Moore Wellness	<a href="https://www.tiktok.com/@moorewellness/video/6981959221638122758">https://www.tiktok.com/@moorewellness/video/6981959221638122758</a>	Other
8	Moore Wellness	<a href="https://www.tiktok.com/@moorewellness/video/6988229851190709510">https://www.tiktok.com/@moorewellness/video/6988229851190709510</a>	Other
9	Moore Wellness	<a href="https://www.tiktok.com/@moorewellness/video/6980113610152463621">https://www.tiktok.com/@moorewellness/video/6980113610152463621</a>	Other
10	Reyna	<a href="https://www.tiktok.com/@reynacohan/video/6961546204115111173">https://www.tiktok.com/@reynacohan/video/6961546204115111173</a>	Other
11	IOHA	<a href="https://www.tiktok.com/@instituteofhumananatomy/video/6787103439676558598">https://www.tiktok.com/@instituteofhumananatomy/video/6787103439676558598</a>	Other

TABLE 9: TikTok videos in final data set

## Additional Information

### Disclosures

**Human subjects:** All authors have confirmed that this study did not involve human participants or tissue.

**Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue.

**Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

## References

- Hoy D, March L, Brooks P, et al.: The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis.* 2014, 73:968-74. [10.1136/annrheumdis-2013-204428](https://doi.org/10.1136/annrheumdis-2013-204428)
- Koes BW, van Tulder MW, Thomas S: Diagnosis and treatment of low back pain. *BMJ.* 2006, 332:1430-4.



- 10.1136/bmj.332.7555.1430
3. Balague F, Mannion AF, Pellisé F, Cedraschi C: Non-specific low back pain. *Lancet*. 2012, 379:482-91. [10.1016/S0140-6736\(11\)60610-7](https://doi.org/10.1016/S0140-6736(11)60610-7)
4. Jones MA, Stratton G, Reilly T, Unnithan VB: Biological risk indicators for recurrent non-specific low back pain in adolescents. *Br J Sports Med*. 2005, 39:137-40. [10.1136/bjsm.2003.009951](https://doi.org/10.1136/bjsm.2003.009951)
5. Calvo-Muñoz I, Gómez-Conesa A, Sánchez-Meca J: Prevalence of low back pain in children and adolescents: a meta-analysis. *BMC Pediatr*. 2013, 13:14. [10.1186/1471-2431-13-14](https://doi.org/10.1186/1471-2431-13-14)
6. Clark NM, Becker MH, Janz NK, Lorig K, Rakowski W, Anderson L: Self-management of chronic disease by older adults: a review and questions for research. *J Aging Health*. 1991, 3:3-27. [10.1177/089826439100300101](https://doi.org/10.1177/089826439100300101)
7. Dineen-Griffin S, Garcia-Cardenas V, Williams K, Benrimoj SI: Helping patients help themselves: a systematic review of self-management support strategies in primary health care practice. *PLoS One*. 2019, 14:e0220116. [10.1371/journal.pone.0220116](https://doi.org/10.1371/journal.pone.0220116)
8. Riegel B, Jaarsma T, Lee CS, Strömberg A: Integrating symptoms into the middle-range theory of self-care of chronic illness. *ANS Adv Nurs Sci*. 2019, 42:206-15. [10.1097/ANS.0000000000000237](https://doi.org/10.1097/ANS.0000000000000237)
9. Li Y, Guan M, Hammond P, Berrey LE: Communicating COVID-19 information on TikTok: a content analysis of TikTok videos from official accounts featured in the COVID-19 information hub. *Health Educ Res*. 2021, 36:261-71. [10.1093/her/cyab010](https://doi.org/10.1093/her/cyab010)
10. Song S, Zhao YC, Yao X, Ba Z, Zhu Q: Serious information in hedonic social applications: affordances, self-determination and health information adoption in TikTok [Preprint]. *J Doc*. 2021, ahead-of-print:10.1108/JD-08-2021-0158
11. Song S, Zhao YC, Yao X, Ba Z, Zhu Q: Short video apps as a health information source: an investigation of affordances, user experience and users' intention to continue the use of TikTok. *Internet Res*. 2021, 31:2120-42. [10.1108/INTR-10-2020-0593](https://doi.org/10.1108/INTR-10-2020-0593)
12. ByteDance: Our products . (2021). Accessed: October 30, 2021: <https://www.bytedance.com/en/products/>.
13. Slate: A guide to TikTok for anyone who isn't a teen . (2018). Accessed: October 30, 2021: <https://slate.com/technology/2018/09/tiktok-app-musically-guide.html>.
14. TikTok hits 1 billion monthly active users globally - company . (2021). Accessed: October 30 2021: <https://www.reuters.com/technology/tiktok-hits-1-billion-monthly-active-users-globally-company-2021-09-27/>.
15. Pew Research Center: Social media use in 2021 . (2021). Accessed: October 30, 2021: <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>.
16. Literat I: "Teachers act like we're robots": TikTok as a window into youth experiences of online learning during COVID-19. *AERA Open*. 2021, 7:10.1177/2332858421995537
17. Basch CH, Hillyer GC, Jaime C: COVID-19 on TikTok: harnessing an emerging social media platform to convey important public health messages. *Int J Adolesc Med Health*. 2020, [10.1515/ijamh-2020-0111](https://doi.org/10.1515/ijamh-2020-0111)
18. Kong W, Song S, Zhao YC, Zhu Q, Sha L: TikTok as a health information source: assessment of the quality of information in diabetes-related videos. *J Med Internet Res*. 2021, 23:e30409. [10.2196/30409](https://doi.org/10.2196/30409)
19. Chadee P, Evans S: Representation of #CAMHS on social media platform TikTok . *BJPsych Open*. 2021, 7:241-42. [10.1192/bjo.2021.645](https://doi.org/10.1192/bjo.2021.645)
20. Fowler LR, Schoen L, Smith HS, Morain SR: Sex education on TikTok: a content analysis of themes . *Health Promot Pract*. 2021, 15248399211031536. [10.1177/15248399211031536](https://doi.org/10.1177/15248399211031536)
21. Villa-Ruiz C, Kassamali B, Mazori DR, Min M, Cobos G, LaChance A: Overview of TikTok's most viewed dermatologic content and assessment of its reliability. *J Am Acad Dermatol*. 2021, 85:273-4. [10.1016/j.jaad.2020.12.028](https://doi.org/10.1016/j.jaad.2020.12.028)
22. Song S, Xue X, Zhao YC, Li J, Zhu Q, Zhao M: Short-video apps as a health information source for chronic obstructive pulmonary disease: information quality assessment of TikTok videos. *J Med Internet Res*. 2021, 23:e28318. [10.2196/28318](https://doi.org/10.2196/28318)
23. Harkness S: TikTok vampire fangs. *Br Dent J*. 2020, 229:638. [10.1038/s41415-020-2417-6](https://doi.org/10.1038/s41415-020-2417-6)
24. Revealed: anti-vaccine TikTok videos being viewed by children as young as nine . (2021). Accessed: Nov 1, 2021: <https://www.theguardian.com/technology/2021/oct/08/revealed-anti-vaccine-tiktok-videos-viewed-children-as-young-as-ni...>
25. TikTok Community Guidelines. (2021). Accessed: November 1, 2021: <https://www.tiktok.com/community-guidelines>.
26. TikTok Transparency Report. (2021). Accessed: November 10 2021: <https://www.tiktok.com/safety/resources/transparency-report-2020-2?lang=en-au>.
27. Most used social media . (2021). Accessed: November 1, 2021: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>.
28. Drozd B, Couvillon E, Suarez A: Medical YouTube videos and methods of evaluation: literature review. *JMIR Med Educ*. 2018, 4:e3. [10.2196/mededu.8527](https://doi.org/10.2196/mededu.8527)
29. Sampson M, Cumber J, Li C, Pound CM, Fuller A, Harrison D: A systematic review of methods for studying consumer health YouTube videos, with implications for systematic reviews. *PeerJ*. 2013, 1:e147. [10.7717/peerj.147](https://doi.org/10.7717/peerj.147)
30. Madathil KC, Rivera-Rodriguez AJ, Greenstein JS, Gramopadhye AK: Healthcare information on YouTube: a systematic review. *Health Informatics J*. 2015, 21:173-94. [10.1177/1460458213512220](https://doi.org/10.1177/1460458213512220)
31. Zheluk A, Maddock J: Plausibility of using a checklist with YouTube to facilitate the discovery of acute low back pain self-management content: exploratory study. *JMIR Form Res*. 2020, 4:e23366. [10.2196/23366](https://doi.org/10.2196/23366)
32. Lee YW, Strong DM, Kahn BK, Wang RY: AIMQ: a methodology for information quality assessment . *Inf Manag*. 2002, 1:133-46. [10.1016/S0378-7206\(02\)00043-5](https://doi.org/10.1016/S0378-7206(02)00043-5)
33. Zhu C, Xu X, Zhang W, Chen J, Evans R: How health communication via Tik Tok makes a difference: a content analysis of Tik Tok accounts run by Chinese provincial health committees. *Int J Environ Res Public Health*. 2019, 17:192. [10.3390/ijerph17010192](https://doi.org/10.3390/ijerph17010192)
34. Azer SA: Are DISCERN and JAMA suitable instruments for assessing YouTube videos on thyroid cancer? Methodological concerns. *J Cancer Educ*. 2020, 35:1267-77. [10.1007/s13187-020-01763-9](https://doi.org/10.1007/s13187-020-01763-9)

35. How TikTok recommends videos #ForYou. (2019). Accessed: October 30, 2021: <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.
36. #backpain hashtag videos on TikTok. (2021). Accessed: October 30, 2021: <https://www.tiktok.com/tag/backpain>.
37. TikTok Scraper & Downloader. (2021). Accessed: October 30 2021: <https://www.npmjs.com/package/tiktok-scraper>.
38. Parsehub: What is web scraping and what is it used for?. (2021). Accessed: December 8, 2021.: <https://www.parsehub.com/blog/what-is-web-scraping/>.
39. Chung CJ, Nam Y, Stefanone MA: Exploring online news credibility: the relative influence of traditional and technological factors. *J Comput-Mediat Comm*. 2012, 17:171-86. [10.1111/j.1083-6101.2011.01565.x](https://doi.org/10.1111/j.1083-6101.2011.01565.x)
40. Foster NE, Anema JR, Cherkin D, et al.: Prevention and treatment of low back pain: evidence, challenges, and promising directions. *Lancet*. 2018, 391:2368-83. [10.1016/S0140-6736\(18\)30489-6](https://doi.org/10.1016/S0140-6736(18)30489-6)
41. O'Connor C, Joffe H: Intercoder reliability in qualitative research: debates and practical guidelines. *Int J Qual Meth*. 2020, 19:[10.1177/1609406919899220](https://doi.org/10.1177/1609406919899220)
42. Cascio MA, Lee E, Vaudrin N, Freedman DA: A team-based approach to open coding: considerations for creating intercoder consensus. *Field Meth*. 2019, 31:116-30. [10.1177/1525822X19838237](https://doi.org/10.1177/1525822X19838237)
43. Outside: Help, I'm obsessed with chiropractors on Instagram. (2021). Accessed: November 23, 2021: <https://www.outsideonline.com/health/wellness/chiropractors-instagram-chirogram/>.
44. "Cracked Like a Glowstick": How chiropractic YouTube hooks obsessive fans. (2019). Accessed: October 31, 2021: <https://www.vice.com/en/article/5dmmdb/chiropractic-adjustment-videos-youtube>.
45. Poerio GL, Blakey E, Hostler TJ, Veltri T: More than a feeling: autonomous sensory meridian response (ASMR) is characterized by reliable changes in affect and physiology. *PLoS One*. 2018, 13:e0196645. [10.1371/journal.pone.0196645](https://doi.org/10.1371/journal.pone.0196645)
46. Occhiropractor Dr A: Who needs this?. (2020). Accessed: October 31, 2021: <https://www.tiktok.com/@occhiropractor/video/6825697649841245445>.
47. MUD; 5 reasons why TikTok should not allow longer videos. (2021). Accessed: October 31, 2021: <https://www.makeuseof.com/reasons-why-tiktok-should-not-allow-longer-videos/>.
48. Suarez-Lledo V, Alvarez-Galvez J: Prevalence of health misinformation on social media: systematic review. *J Med Internet Res*. 2021, 23:e17187. [10.2196/17187](https://doi.org/10.2196/17187)