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LITERATURE REVIEW
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YouTube Video as a Media of Anemia Education in Indonesia: A Narrative Review

Video YouTube sebagai Media Edukasi Anemia di Indonesia: A Narrative Review

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ABSTRACT

Background: *The effectiveness of Anemia program in Indonesia must be supported by good public knowledge. YouTube can be used as a learning source to educate people about anemia. Anemia educational videos on YouTube have different characteristics that are interesting to analyze.*

Objectives: *To identify the availability and describe the characteristics of anemia educational videos on YouTube.*

Methods: *Videos were searched via google.com and youtube.com with the keywords "anemia education in Indonesia". Videos were screened according to the criteria. Video form, type of uploader, duration, and number of views were identified. The educational contents were analyzed based on 5 points of anemia information.*

Discussion: *Among 115 videos obtained, 28 videos met the criteria. Most anemia videos on YouTube were animated videos (51.72%), found on non-government/private channels (41.38%), and had more than 3 minutes duration (55.17%). The average video length was 190.68 seconds, ranging from 1,033 to 77,628 number of views, and each video was viewed 24 times a day. The highest number of views were videos featuring presenters/health care professionals, videos from non-government channels, and videos with 3-6 minutes duration. Over 60% of videos explained the definition, causes, impacts, signs/symptoms, and the prevention of anemia.*

Conclusions: *There were many different characteristics of anemia educational videos on YouTube. Besides duration and number of views, the quality of information and feasibility are important aspects in producing educational videos. Further research is needed to see the relationship between duration, video form and type of uploader on people engagement.*

INTRODUCTION

Anemia is a severe nutritional issue since it affects one-third of all women of childbearing age worldwide[1]. In 2018, the prevalence of anemia in pregnant women in Indonesia was 48.9%, whereas it was 32% among adolescent aged 15-24. If not addressed quickly, anemia will have an influence on the following generation's health and quality of life, similar to an unbroken chain. Anemia in pregnant women is linked to morbidity and mortality in both mother and child, as well as an increased risk of preterm birth and low birth weight babies[3]. Anemia in adolescent and women of childbearing age will weaken the body's immunity, making it more susceptible to infections, decreasing focus owing to a lack of oxygen in muscle and brain cells, and lowering learning accomplishment and productivity/performance. Anemia also influences the quality of human resources in the future. Indirectly, a reduction in the quality of human resources reduces national economic productivity[4]. The World Health Organization (WHO) has given serious attention to the problem of anemia through its Global Nutrition Targets,

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which include a 50% decrease of anemia in women of childbearing age by 2025[1].

Since 2014, the Indonesian government has attempted to prevent and conquer anemia by implementing a program that provides iron supplementation named Tablet Tambah Darah (TTD) to adolescent and pregnant women. However, providing TTD in pregnant women does not always result in anemia reduction rates. The 2018 Basic Health Research (RISKESDAS) results suggest that the proportion of pregnant women with anemia increase by 11% compared to 2013. Female adolescent compliance with TTD intake is quite poor in several locations of Indonesia[5-7]. This low compliance is linked to a lack of understanding of anemia as well as awareness of preventative efforts[5,8,9]. Education is the primary requirement for executing the WHO plan to eliminate anemia in women of childbearing age[1]. This is to guarantee that every prospective recipient understands the importance of preventing anemia. Aside from that, to support the effectiveness of government initiatives in decreasing anemia, it is vital to determine if educational information sources are sufficient and accessible to the public[3].

In the digital age, internet-based technology makes it easier for people to access information. The advancement of information technology has been shown to contribute to the enhancement and efficacy of learning[10]. Social media as a new technology, is the most extensively utilized source of information search in society today, surpassing television, print media, and other media[11,12]. YouTube is one of the social media platforms that is being used to search for and disseminate health information in audiovisual format. Audio-visual media incorporates all types of material, including words, graphics, and sound, making it more illustrative than audio or visual media alone[10]. YouTube becomes the most popular social media platform in Indonesia, with 139 million users, surpassing Instagram and Facebook[12]. According to a survey, Indonesia ranks fifth in the world among internet users who view online videos for educational purposes[13]. This demonstrates the supportive attitude of society regarding the use of information technology in learning activities. The usage of YouTube videos in Indonesia has also been shown to raise understanding of anemia and adherence to TTD consumption[14, 15]. These achievements highlight YouTube's potential for sharing content to promote the effectiveness of anemia reduction programs in Indonesia.

There are several informative videos about anemia available on YouTube, each with its own unique qualities. After YouTube's popularity grew, several YouTube channels were discovered that posted videos giving health information. Governments, private sectors, communities/groups, and people all utilize YouTube for public education. Engagement metrics are used by YouTube users to measure the popularity of videos published to a channel[16]. The number of views is one of the measures used to assess engagement. The more views, the higher the traffic, and the greater the interest in the video. This study aims to identify and describe the availability and features of YouTube videos as a medium for anemia education in Indonesia. It is intended that the study's findings would serve as a reference resource for video content makers, particularly those who use YouTube as a distribution tool.

METHODS

YouTube videos were accessed via Google (google.com) and YouTube (youtube.com) searches. Google searches for "anemia education in Indonesia." Searching on google.com also activates filters such as: (1) uploaded in the previous five years from November 2018 to November 2023; (2) video duration 0-4 minutes and 4-20 minutes; and (3) only videos from youtube.com. Meanwhile, further YouTube video searches employed the phrase "anemia education in Indonesia" and were ordered based on relevance. Videos were reviewed based on the following inclusion criteria: (1) delivered in Indonesian language, (2) uploaded during the previous 5 years, (3) having a maximum duration of 6 minutes, (4) having a minimum number of views of 1000, and (5) describing the issue of anemia in humans. Meanwhile, the exclusion criteria were as follows: addressing health concerns related to anemia but not anemia itself (for example, malaria, thalassemia), and the videos lacked educational aspects. Previous research has shown that the average amount of time spent watching videos was 6 minutes, hence videos with a maximum duration of 6 minutes were chosen. Meanwhile, videos that last more than 9 minutes are less likely to be watched all the way through[17].

Video that met the criteria would be recognized to identify its features as well as a description of the instructional content. According to earlier research[18], the author identified video characteristics such as video title, URL, uploader's name, duration, length of video on YouTube (days), number of views (counted by one person on November 18, 2023), uploader type, and type of video. Video durations were divided into two categories: 0-3 minutes and 3-6 minutes. The length of video on YouTube is the number of days from the video's upload date to the present (analysis on November 18, 2023). There were three types of uploaders: government institution, non-governmental/private institutions/groups, and individuals. Video types are divided into animated and non-animated videos. The animated videos in this study included those that showed explanations complemented by artificial graphics or drawings. Non-animated movies include: (1) information delivery by the presenter/figures (anemia was discussed directly by someone who appears in the video); (2) demonstration (actors in drama/story); and (3) presentation slides (explanatory narrative PPT slides displaying more than 70%). The educational material of the video was evaluated by identifying five key points of information that must be understood about anemia: (1) the meaning of anemia; (2) causes of anemia; (3) the impact/danger of anemia; (4) signs/symptoms of anemia; and (5) how to prevent and treat anemia. The five bits of information were chosen based on the author's judgement, as there are no formal rules for creating anemia instructional media. This research used descriptive analysis to describe the features and educational content of video.

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DISCUSSION

A total of 115 YouTube videos were successfully discovered from two specified database sites: google.com and youtube.com. Duplication checks were performed prior to the screening step. 13 videos were excluded from the screening due to duplication Of the 102 videos examined, 70 did not meet the inclusion criteria. A total of 25 videos (24.5%) lasted more than 6 minutes, 14 videos (13.7%) had fewer than 1,000 views, and 31 videos (30.4%) were unrelated to the topic of anemia. Four videos were omitted from the research because they did not contain educational aspects, resulting in a total of 28 videos studied (Figure 1).

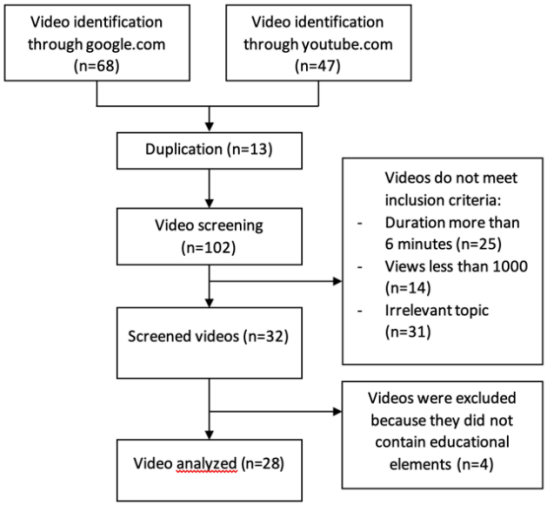

Figure 1. Information on YouTube video identification stages

Characteristics of Anemia Educational Videos on YouTube

Video characteristics were determined by video type, uploader type, duration, length period of video on YouTube, number of views, and views per day. According to the data (Table 1), half of all anemia educational videos on YouTube were animated (51.72%), while a third (34.48%) were videos delivering information through presenters/figures who appeared in the videos. Non-governmental, private institutions, and groups channels uploaded the most videos (41.38%), with government institutions uploading the remaining 31.03%. Videos that last between 3 and 6 minutes were more prevalent than those that last less than three minutes. The majority of anemia educational videos on YouTube were less than 2.5 years old (57.14%). Most of the videos concerned anemia, with just 27.59% expressly addressing TTD.

Table 1. General characteristics of anemia educational videos on YouTube (n=28)

Video Characteristics	n	%
Video Type		
Animation	15	51,72
Information delivery by presenters/figures	10	34,48
Demonstrations in short stories	2	6,90
Presentation slides	1	3,45
Uploader Type		
Government Institution	9	31,03
Non-governmental/private institutions/groups	12	41,38
Individual	7	24,14
Duration		
0-3 minutes	12	41,38
3-6 minutes	16	55,17
Length period of video on YouTube		
< 2,5 years	16	57,14
2,5 - 5 years	12	42,86
Anemia Topic		
Anemia	20	68,97
Specifics of iron supplementation (TTD)	8	27,59

According to Table 2, the average anemia educational video on YouTube lasts more than 3 minutes (190.68 seconds ± 145.50). The number of views ranged from 1,033 to 77,628 since the video was initially uploaded on YouTube. The oldest video on YouTube was uploaded 2032 days ago, while the most recent video was

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uploaded 259 days (8 months) ago. By dividing the total number of views by the length period of video on YouTube, one can determine that each video was viewed 24 times on average per day. The quantity of YouTube video views was used to determine the level of video popularity.

Table 2. Characteristics of the length, number of views, and length period of video on YouTube

Characteristics	n	Mean ± SD	Min-max
Duration (second)	28	190,68 ± 145,50	47 - 338
Number of views (times)	28	20.490,96 ± 39.812,32	1.033 - 77.628
Length period of video on YouTube (days)	28	944,46 ± 894,07	259 - 2032
Number of views per day (times)	28	24,36 ± 57,99	0,98 - 111,04

Many of the anemia educational videos on YouTube were animation. In keeping with the rapid growth of media today, some assumed that video with animation is a quick and effective learning tool[19-22] and increases interdisciplinary learning in health education[23-24]. According to a survey, digital animation learning material is more stimulating, fascinating, clear, effective, and recommended to students than textbooks[24]. The following factors can help animated videos become effective learning media: (1) employing emotionally appealing music or background sound; (2) narrating the tale with words that do not impair language or literacy; and (3) using culturally neutral illustration characters[25]. Given Indonesia's racial, cultural, and religious diversity, neutrality is an important consideration when designing educational media. Animated videos can be used to predict this. Aside from that, creating the concept of an animated video must include age-related targets as well[26].

Anemia educational videos were posted by YouTube channels from the government, non-government/private sector, groups/organizations, and individuals. In terms of quantity, non-government/private YouTube channels outnumber government channels. The majority of these non-governmental or private institutions work in the health sector, such as Premier Bintaro Hospital, Premier Jatinegara Hospital, Kasih Ibu Hospital, Kata Dokter, Hallo Sehat, and the United Nations International Children's Emergency Fund (UNICEF) YouTube channels. There is also a channel from a non-profit educational organization called Ruangguru Bimbel. Only a few government institutions, like the Indonesian Ministry of Health, the Indonesian Ministry of Communication and Information, public health centers (Puskesmas), and state higher education institutions, post anemia educational videos on YouTube. The limited availability of educational videos from government channels might be attributed to the fact that majority of health institution in Indonesia, such as public health centers (Puskesmas), usually use videos that created by the Indonesian Ministry of Health. Not only do videos, but so do other media such as posters and booklets. However, it should be recognized that Indonesians varies by area, thus it is desired that educational media may be made to reflect local customs and acceptability. Each regional public health center can recreate and deliver the educational materials created by the Indonesian Ministry of Health in a more creative way.

Educational videos are more readily available from non-governmental or private institutional channels than from government institutions. This is related to the abundance of non-governmental channels, which outnumber government channels. Based on these findings, it is vital to uncover additional government channels that publish anemia educational video. Given that TTD program is a government initiative, the people should be aware of and comprehend it. The digital literacy index of Indonesian society has increased from 2021[11], according to a survey performed by the Ministry of Communication and Information. This discovery is highly fascinating, given Indonesian people is becoming more open to utilizing digital technologies to look for information. This progress needs to be monitored by every institution in Indonesia, including the government, in terms of using social media, particularly YouTube, to provide reliable anemia education information to the public.

The length of the videos found varied depending on how much information was conveyed in the video. Videos with a duration of less than 3 minutes mostly had specific anemia topics such as recommendations for consuming iron supplement (TTD) or just an explanation of the impact of anemia, so the information in the video is limited. Some examples of video titles are “Pentingnya Konsumsi TTD (Tablet Tambah Darah) Bagi Remaja dan Ibu Hamil”, “[Motion Grafis] Dampak Anemia terhadap Remaja” ("The Importance of Consuming TTD (Blood Supplement Tablets) for Teenagers and Pregnant Women", "[Graphic Motion] The Impact of Anemia on Teenagers"). Meanwhile, videos with a duration of more than 3 minutes were dominated by the topic of discussing anemia which provided more complete and detailed information. An example of a video with a duration of 3-6 minutes, namely “Anemia, Kenali Gejala dan Cara Mengatasinya - Kata Dokter Laura”, “Anemia? Ini Dia Penyebab dan Penanganannya”, “Apa Itu Anemia? Kenali Gejalanya dan Simak Penjelasan Berikut Ini!” (“Anemia, Recognize the Symptoms and How to Overcome It - Says Doctor Laura”, “Anemia? Here are the causes and treatment", "What is anemia? Recognize the Symptoms and Read the Following Explanation!").

The word "number of views" is frequently used in YouTube Analytics, a function provided by YouTube to users to measure the growth of a YouTube channel. The number of views is one of measures in determining engagement metrics for a YouTube account or channel. YouTube engagement metrics represent how many times a viewer interacts with the video and it may be used to determine a video's or channel's overall popularity[16]. The more views, the higher the traffic, and the greater the interest in the video. The number of video views indicates how many videos are seen, whereas the number of views

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per day indicates how frequently a video is viewed in one day by viewers.

The total number of days since a video was initially uploaded determines how long the period it has been viewed on YouTube. This statistic was used to compute the number of views per day, which is one of the important indicators in analyzing YouTube interaction metrics. This research limited educational videos to a maximum upload date of five years ago. Length period of videos on YouTube was divided into two categories: old videos, which were posted more than 2.5 years ago, and new videos, which were uploaded within the previous 2.5 years. Older recordings were posted between 2018 and 2020, while newer videos were uploaded between 2021 and 2023. YouTube contains more recent anemia informative videos than older videos. Most of videos on anemia were uploaded in 2021. The fact that 2020 and 2021 were pandemic years, social media was become the most popular source of information search compared to other sources. Aside from that, in 2021, YouTube was a prominent social media platform, with public trust growing by 5.6% over 2020[27].

Number of Views Based on Video Type, Uploader Type, Duration, and Length Period of Video on YouTube

The number of views per day was analyzed based on video type, uploader type, duration, and length period of video on YouTube (Table 3). Videos with a presenter or figure delivering educational content receive the most views (29,557.7 ± 22,353.08) and views per day (41 ± 36.4) compared to other categories of animated and non-animated videos. According to the uploader type, videos from non-governmental or private institutional channels are seen more frequently than videos from government or individual YouTube channels. Videos lasting 3 to 6 minutes had higher daily views (36.59 ± 34.39) compared to those lasting less than 3 minutes (8.04 ± 8.5). The average number of views did not differ significantly between videos that had been on YouTube for a long period (2.5-5 years) and newer videos (the previous 2.5 years). However, the newer videos had a larger number of views per day than the older ones.

Table 3. Number of video views based on video type, uploader, duration and length of time the video was uploaded on YouTube

Characteristics	n	Total View (Mean ± SD)	Total views per day (Mean ± SD)
Video type			
Animation	15	17.617,27 ± 25.866,73	16,95 ± 23,27
Information delivery by presenter/figure	10	29.557,7 ± 22.353,08	41 ± 36,40
Demonstrations in short stories	2	1.652 ± 439,82	4,48 ± 3,75
Presentation slides	1	10.579	9
Uploader type			
Government institution	9	13.982,11 ± 22.733,06	15,43 ± 14,85
Non-governmental/private institutions/groups	12	27.687,08 ± 25.867,92	31,45 ± 35,20
Individual	7	16.519,29 ± 22.398,87	23,69 ± 35,17
Duration			
0-3 minutes	12	7.999,67 ± 12.296,5	8,04 ± 8,58
3-6 minutes	16	29.862,2 ± 26.678,1	36,59 ± 34,39
Length period of video on YouTube			
< 2,5 years	16	20421,30 ± 24579,50	32,87 ± 35,85
2,5 - 5 years	12	20581,58 ± 24412,85	13,02 ± 14,01

Based on the video type, anemia education presented directly by a presenter or figure was seen more frequently than animated videos, short demonstrated story, and presentation slides. Even if there were a high number of anemia educational animation videos on YouTube, they were not seen as frequently as educational videos with direct presenters. Seven out of ten videos included health personnel as presenters. The presenters appear in the video were from the medical doctors and midwifery fields. The videos also had thumbnails featuring photos/images of the health personnel participating. Thumbnails have the same purpose as covers, which are visuals that display on YouTube search pages. In online media platform, people make decisions in which videos to click on and watch depending on the information and impressions they get from the thumbnails[28]. This strategy can certainly be utilized by content creators to enhance the number of video views.

The involvement of health professionals in educational videos is associated with a person's proclivity to trust health information provided by health-care experts/professionals as opposed to non-health practitioners. Even while the internet is increasingly being used to seek for information, it cannot replace the main role of health workers. Everyone can acquire health information readily and independently, yet studies show that public trust in health providers remains high.[29,30] This demonstrates how health professional figures may impact a person's level of trust in health information.

Videos from non-governmental or private institution YouTube channels had a higher number of views per day than government or individual channels. Most of the educational videos on private institution

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YouTube channels featured health professionals as an educator, while on government and individual channels most of the educational videos are animated. However, these findings cannot directly justify that anemia educational videos from private institution channels are more interesting or more liked than videos made by the government. Based on the YouTube algorithm, apart from the number of views, the engagement metric is also related to the number of likes, dislikes and subscriptions[16]. This means that to assess whether educational videos on YouTube are interesting or not, people also need to look at the number of viewers who like, dislike and subscribe to a channel. Based on the channel popularity, in the context of anemia educational videos, private institution YouTube channels are more popular than government and individual channels as evidenced by the number of subscribers. In addition, private YouTube channels are more active in uploading video content than government channels.

The fast advancement of technology and the widespread usage of the internet have resulted in a generation with short attention spans. The American Psychological Association Dictionary of Psychology defines attention span as the length of time an individual can concentrate on one specific task or other item of interest[31]. Humans have attention span 8.25 seconds, 8 seconds in generation Z, and 12 seconds in millennials[32]. Another research found that students spend no more than 6 minutes watching a video and only watch half of video that lasts longer than 9 minutes[17]. Learning method using videos that last under 5 minutes than longer-duration videos is more effective in improving students learning outcomes[33]. Thus, the duration is an important aspect to consider when producing an educational video. In the other side, short videos are more engaging, can increase learning outcomes, and affect students' decisions to utilize videos for future learning[34-36].

The number of views was calculated using the length period of the video on YouTube. The most recent anemia educational videos were seen more frequently each day than older videos. The oldest video on YouTube in this study was titled “Edukasi Tablet Tambah Darah ("Education on Iron Supplement Tablets") which uploaded by the Indonesian Ministry of Health's official YouTube channel (Ayo Sehat Kementerian Kesehatan RI). The video was released in 2018 and has been seen over 73,000 times. The latest anemia educational video was uploaded by The Tribunnews YouTube channel, titled “Apa Itu Anemia? Kenali Gejalanya dan Simak Penjelasan Berikut Ini!” ("What is Anemia?" Recognize the symptoms and read the explanation below!"). This video was posted in 2021 and has been watched over 77,000 times. Tribunnews' video had more views per day, 86.2 times, than the Indonesian Ministry of Health's video which received just 36. According to these number of views per day, Tribunnews' anemia educational videos were more popular than the Indonesian Ministry of Health. The difference between the both video in term of duration is that Tribunnews' video is two minutes shorter than the Indonesian Ministry of Health's video. This finding implies that the longer the video on YouTube does not necessarily make it is seen more frequently than the latest video. A further comprehensive analysis of other parameters such as duration, video content quality, and YouTube channels is much required.

Analysis of Anemia Educational Content in YouTube Videos

In this study, content analysis was performed by identifying five information points in anemia educational video material. These five areas cover the definition, causes, effect, sign/ symptoms, and how to prevent and treat anemia. These five points are the basic essential knowledge that people should know about anemia. It is also informative enough to be conveyed in less than 6 minutes video. The authors determine the five points of anemia educational material based on personal judgement by considering also the content material of media created by the Indonesian Ministry of Health. Given that no rules for developing educational media, particularly anemia, have been discovered in Indonesia.

A total of 14 videos (50%) covered all five points of anemia education information completely, 5 videos provided four points (17.8%), 3 videos described three points (10.7%), 4 videos explained just two points (14.3%), and 2 videos included only one point of information (7.1%) (Figure 2). The video that covered all five elements included a discussion topic regarding anemia, and only one video expressly discussed TTD. The four-point video explained the definition of anemia, the causes of anemia, the sign and symptoms of anemia, and how to prevent and treat anemia, but it did not discuss the impact of anemia. The four-point videos largely focused on anemia, with only one video specifically mentioning iron supplement. Of the three videos with three points of information, one discussed the causes, effects, and ways to prevent anemia, one explained the definition, symptoms, and ways to prevent anemia, and the third one described the impacts, symptoms, and ways to prevent anemia. Videos with one or two points of information mostly discussed TTD concerns; therefore, they merely described the impact and methods for preventing anemia.

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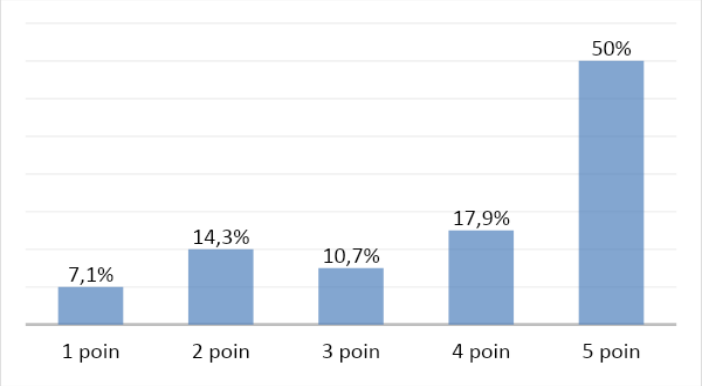

Figure 2. The percentage of videos by number of information points described

The video uploaded by the Indonesian Ministry of Health with entitled "Edukasi Tablet Tambah Darah" (Education on Iron Supplement Tablets) is an example of video that provides complete anemia education information with a total of 73 thousand views. Another video that has complete points of education was uploaded by Chrisan Bimo's YouTube channel with the title "Makanan Penambah Darah Untuk Mencegah Anemia atau Kurang Darah" (Blood Booster Foods to Prevent Anemia) and had been watched by more than 49 thousand times. If compared, the two videos had almost the same duration, around 5 minutes. Another video with high number of views was the video entitled "Apa Itu Anemia? | Kamus Penyakit A: Anemia" (What is Anemia? | Disease dictionary A: Anemia) uploaded by the Hallo Sehat channel. This video had been watched more than 43 thousand times. The difference between the video from Hallo Sehat and other channels was that it had a short duration, less than 2 minutes, but contained complete anemia information (5 points). Further analysis of video quality and engagement metrics is needed to identify the factors that cause the high number of views of an educational video.

The length of video increases with the amount of information included inside it. The video with the longest duration had 5 points of educational information in total, followed by videos with 3 points, 4 points, 2 points, and the smallest was 1 point (Figure 3). Videos containing 3-5 points of anemia information had an average length of more than 3 minutes. According to the preceding debate, the most popular anemia videos were those that last between three and six minutes. As a result of this research, audiences preferred short videos with comprehensive educational content. The average duration of videos with 3 points and 5 points of information was nearly same; therefore, video content makers can further optimize the use of short durations to incorporate comprehensive educational material. Creativity is needed to make video into attractive and useful learning media.

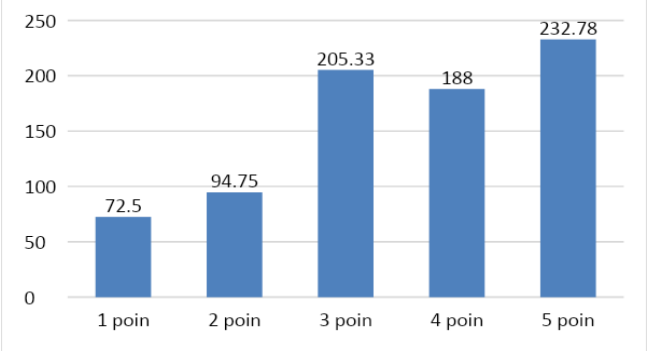

Figure 3. The duration (seconds) of the video by number of information points described

The amount of information included in a video depends on the topic being discussed and the purpose for which it is made. Videos with specific topics about TTD mostly did not explain the definition, causes, or sign/symptoms of anemia, but only describe the impact and how to prevent anemia. The video was made with the aim of encouraging the audience to consume TTD, not explaining anemia. The target of this kind of video is more appropriate if it is aimed at an audience who specifically discuss TTD, people will understand the relationship between TTD consumption and anemia. already knows anemia before. Meanwhile, the video which contains complete information aims to provide an understanding of anemia for people who are still unfamiliar with it. Even though it only contains topics about TTD, video makers should still include the meaning or definition of anemia considering that people still don't know what anemia is clearly. On the other hand, by explaining the meaning of anemia in videos that

This study's content analysis involved determining the quantity of educational material

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presented in the video. This consideration alone is insufficient to explain the quality of video material because each video is presented differently. Videos with fewer information points but more extensive explanations may be preferable than videos with numerous information points but insufficient explanation due to time constraints. This is associated to the information accuracy. Unfortunately, in this study most educational videos do not offer reference materials, preventing viewers from cross-checking the facts. Several comparable researches employed the DISCERN and Global Quality Score (GQS) methods to assess the information quality of educational videos[37,38]. DISCERN assessment features include video transparency, video content, and user-friendly assessment summaries[37]. Meanwhile, GQS evaluates the quality of content, the flow, and the ease of using information which provided online[39]. Effective instructional material must be simple for people to grasp.

This study is confined to determining the availability and features of anemia educational videos on YouTube. The author did not evaluate the quality of the anemia educational video material, which is a limitation in the study. Further study is needed to assess the quality of anemia educational videos on YouTube. Assessing video quality based on audience response can use the YouTube analytics function to analyze engagement metrics, while assessing information quality can employ instruments used in previous comparable research, such as DISCERN or GQS.

CONCLUSION

There were several anemia educational videos available on YouTube, each with its own unique qualities. Anemia videos on YouTube were largely recent videos published during the previous 2.5 years. Anemia videos with a large number of views were those that involved health professionals as educators, videos from private institution YouTube channels, and video with 3 to 6 minutes duration. The majority of YouTube videos provide comprehensive anemia educational content, but there are others that provide only a little information, so people have to be quite selective. Content quality is an important consideration for video creators in producing educational media. The video length, number of views, and number of points of educational content conveyed alone are insufficient indicators of the quality of educational videos on YouTube. Aside from engagement metrics, the quality of information and media usability are important elements while creating YouTube educational videos. Further investigation is needed to determine the association between duration, video type, and uploader type to the engagement on anemia educational videos on YouTube.

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CONFLICTS OF INTEREST AND FUNDING SOURCES

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