



“Maybe a Long Fast Is Good for You”: Health Conceptualisations in YouTube Diet Videos

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In this paper, we study which health conceptualisations are promoted or supported by intermittent fasting, no-carb-no-sugar, and endomorph Diet YouTubers and how they relate to existing definitions of health. In order to openly understand how YouTubers present health concepts, we will study health conceptualisations in YouTube diet videos qualitatively, through the use of thematic analysis. We identify five main themes: weight management, prior dietary awareness, diet literacy, quality of life, and the satisfaction of functional needs. We find that YouTubers substitute the WHO’s pursuit of a complete state of well-being by an implicit, tacit version of new health concepts. The tacit form allows them to stay practical and to focus on real-world dietary concerns, such as answers to the simple question “what should I eat to stay healthy?”. Diet YouTubers do not, however, neatly position themselves within existing health conceptualisations and they offer views on health that move beyond “formal” conceptualisations, including self-inspection, timing, preparation and planning and context-design. Differing from the universal definitions of health, the Diet YouTubers we studied target specific audiences with their presentations of healthy eating.

Keywords: health, healthy eating, health definitions, youtube, diet videos, intermittent fasting, low carb, endomorph

INTRODUCTION

Social media and online video platforms have become crucial channels to access health-related information (Fergie et al., 2016; Heathcote et al., 2018), including the video-sharing platform YouTube. YouTube does not produce content itself but provides users means of distributing theirs and provides an online space for a participatory culture (Harmer 2010) and the popularity of the platform suggests a huge potential for knowledge distribution. In fact, after Google, Youtube has become the second-largest global search engine (Gupta et al., 2017; Allgaier, 2020).

YouTube videos are known for their entertainment value, but increasing amounts of professional information health-related topics are finding their way onto the platform (Fernandez-Llatas et al., 2017; Heathcote et al., 2018), provided by both professionals and amateur video-producers. The assessment of online health information (including but not limited to YouTube) is a fast-growing area of study (Sampson et al., 2013), yet in the light of the sheer amount of health communication online, communication via YouTube is understudied (Allgaier 2020). However, video quality varies and the biomedical content is often misrepresented (Allgaier 2019). YouTube also contains a worrying amount of (health) misinformation (Loeb et al., 2019; Madathil et al., 2015), and most studies target the quality of information offered—with much new research appearing on the quality of information on the Covid-19 pandemic and connected vaccination initiatives (Basch et al., 2020; Li

et al., 2020). Our focus is on diet videos. Here too, YouTube plays a significant role in the communication and dissemination of dietary health information and weight loss (Cerri et al., 2012).

Diet video makers speak of health continuously, yet what they exactly refer to is unclear. The World Health Organisation (WHO) defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” in 1948 (WHO 2006). This expanded view, diverting health from diagnosis only, has nonetheless been widely criticised, especially with respect to the word “complete” in relation to well-being, risking medicalisation and overtreatment, selecting against those with disabilities and being impractical and immeasurable (Huber et al., 2011).

Alternative notions of health have been proposed in response, including Leonardi (2018) describing health as “the capability to cope with and to manage one’s malaise and well-being conditions”. Huber et al. (2011) proposed Positive Health as the ability to adapt and self-manage physical, mental and social health, while Lerner (2019) describe health as a balance between ability and goals in their OneHealth perspective. This balance is subject to continuous change: a dynamic state (Bircher 2005). Additionally, the Trans-Domain Model of health (TDM), applies to physical, mental and social health domains. TDM is based upon Positive Health, but with some adaptations: first, a standard level of biological functioning and adaptation, suggested as physical health would include allostasis. Second, a standard level of cognitive-emotional function and adaptation advised as mental health, would include a sense of coherence. Third, differing from Positive Health, a standard level of interpersonal functioning and adaptation, proposed as social health, includes interdependence (Manwell et al., 2015).

Regarding healthy eating (and dieting), additions have been proposed. For instance, Hansen and Thomsen (2018) review three dominant definitions. First, healthy/unhealthy eating: consumers might believe that unhealthy food intake might be balanced out by healthy food intake. Second, mind/body healthy eating: food-related health as a balance between physical and mental health, including emotional well-being. Third, healthy eating guidelines: consumers’ beliefs that they are prone to be unhealthy if they do not conform to official dietary guidelines (Hansen and Thomsen 2018). Other authors highlight barriers such as cost, food preparation, eating habits and self-control, in contrast to motives, such as losing weight, looking attractive, staying healthy and feeling better (Michaelidou et al., 2012; Mete et al., 2019). Basch et al. (2017) have studied diet videos, in line with research proposed here, but focus on weight loss as a single category and do not specify how uploading consumers conceptualise healthy living.

Despite growing numbers of diet videos, how multifaceted views on health have found their way into YouTube diet videos is unknown. Some studies target specific issues, such as perceptions of obesity (Yoo and Kim 2012) or dental health (Gao et al., 2013) in YouTube videos, yet studies of dietary health conceptualisations are lacking.

In this article, we ask which health conceptualisations are promoted or supported by a specific group of YouTubers and how they relate to existing definitions of health discussed above.

In this modest pilot, we focus on intermittent fasting (IF), no-carb-no-sugar (LC) and endomorph (EM) diets. In order to openly understand how YouTubers present health concepts, we will study health conceptualisations in YouTube diet videos qualitatively, through the use of thematic analysis.

METHODS

We selected the top ten diets according to Google Trends 2019 (see <https://trends.google.com/trends/yis/2019/>). These are 1) Intermittent fasting, 2) Dr. Sebi, 3) Noom, 4) 1,200 calories, 5) Golo, 6) Dubrow, 7) Sirtfood, 8) No carbs no sugar, 9) Endomorph and the (10) Jlo diet. On January 15, 2020, we identified the most ten viewed YouTube videos in each of these ten diets and URLs for each video were documented. Search results were tabulated and screened and non-English and duplicate videos were removed. Videos that appeared in multiple searches were assigned manually and videos that did not actually discuss the search term diet were removed. Fifteen videos (eleven duplicated and four non-English) were removed and replaced by another video further down the list of search results.

For all 100 videos, the number of views and comments and video length were documented. All videos were categorised according to origin: consumer videos (amateurs and/or individuals with no discernible professional credentials), professional videos (experts and/or with established organisational affiliations), television clips, internet-based commercial clips (clips marketed for commercial activity) and government videos (by any government agency) (Basch et al., 2015). Results are listed in **Supplementary Appendix 1**.

We purposefully selected three diets (thirty videos) for subsequent qualitative thematic analysis: intermittent fasting, no-carb-no-sugar and endomorph. Despite having distinct names and labels, a lot of the top-10 diets are quite similar. We have selected those three diets with the most distinct nutrient composition or strategy to facilitate the largest span of health conceptualisation in our analysis. Initial screens of the videos revealed a diverse pallet of arguments and positions. In academic literature on these diets, IF claims improved body composition, metabolic health (Horne et al., 2015; Tinsley and La Bounty 2015) and cognitive ability (Mattson and Arumugam 2018; Mattson et al., 2018; Leclerc et al., 2019); LC suggests to help with sleep and diabetes, reduce risk factors for heart disease and reverse the epidemic of obesity (Hite et al., 2011; Daneshzad et al., 2020); and EM tailors specifically to people’s body types and physique (Bolonchuk et al., 2000). All thirty videos were transcribed verbatim by MCC.

We performed a thematic analysis in which the qualitative data itself guides the production of the thematic frame, with a predetermined focus on health conceptualisations through the inclusion of health concepts as sensitising concepts. For the final analysis, we interpreted results in the light of existing health conceptualisations, as introduced above: TDM, OneHealth, Positive Health and the WHO definition of health. We performed thematic analysis as informed by Braun and Clarke (2006). After we observed that most videos take up a lecture

format, ranging from slides with voiceovers to taking heads, only sometimes interrupted or assisted by graphics and video fragments, we chose to focus our analysis on the transcripts of the videos. For more information about the audiovisual presentation in the selected videos, see **Supplementary Table 4**. First, we actively identified patterns and exploring potential codes in the course of the video transcription. Next, transcripts were coded for specific themes, drawn in part from an integrated understanding of health from available literature. These themes were identified on the “manifest level” which could be read in the transcripts, and on the “latent level” which meant the themes were generated inductively from the transcripts. In the final steps, all themes were refined and given labels that reflect health concepts as displayed in or by the YouTube diet videos. The final coding tree is listed in **Supplementary Appendix 2**.

RESULTS

We identify five main themes: weight management, prior dietary awareness, diet literacy, quality of life (QoL), and the satisfaction of functional needs (SFN), of which two, QoL and SFN are only discussed by IF and LC YouTubers.

Weight Management

Across all diets, YouTubers consider weight loss critical to achieve overall health. They consider adaptability in diets and appetite management to be the crucial elements to success in weight management and stress the importance of physical activities as complementary to achieving health.

Nine YouTubers across three selected video sets claim that weight loss and muscle growth are personal goals which could be achieved by dietary change and appetite management, with fat loss mentioned specifically. Two EM YouTubers promote a calorie deficit to lose fat:

“In order to burn fat, you will have to be in a caloric deficit.” (9-4_69-70) “The best way to lose fat is to put yourself in a caloric deficit.” (9-6_39-40)

Four YouTubers (2 IF, 1 LC and 1 EM) highlight adaptation to dietary changes and indicate that adaptability is crucial to achieve personal goals. They encourage their audiences to make dietary changes based upon physical condition and identify this ability to adapt as an indicator to achieve overall health:

“If you want to build muscle, then you have got to adjust the diet. If you want to lose weight, you can adjust the diet. If you want to treat type 2 diabetes, you have to adjust what you are doing.” (1-10_759-761)

Three IF YouTubers consider appetite management as the key for weight loss. One of them shares that arranging all meals within 8 h makes her full all the time in the feeding window:

“By doing intermittent fasting, I could actually see a reduction in my overall appetite because of my three meals all within the 8 h period. I would be quite full the whole time. So, I can see how it really helps people who need to lose weight because they can also eat less by skipping a snack.” (1-5_183-189)

Finally, five IF and EM YouTubers state that people can gain or lose weight easily depending on how they structure both their diet and training. They consider an appropriate combination of diet and workout important to achieving health. One emphasises that diet is more important than training for weight loss:

“Success for an endomorph comes more from diet than weight training specifics.” (9-10_19-20)

Prior Dietary Awareness

Awareness of one’s dietary status before any dietary change is explicitly valued across all videos. Most of the YouTubers talk about the connection between the identification of existing dietary patterns and weight management in a multifaceted way. For instance, three IF and LC YouTubers refer to current eating situations, such as existing eating disorders. Two of them share personal experiences with eating disorders and how they benefit from IF and LC diets. One reports that she has a history of bulimia, and stresses the value of research before adopting any new diet:

“At first, I was actually very hesitant to try because of my eating disorder history. I do not know if I want to put restrictions on my normal diet again. However, my snacking has been getting really out of hand. [...] Thus, after research, I finally decided to give it a try [...]” (1-5_35-39)

LC and EM YouTubers urge people to be conscious about the quality and quantity of their intake, even when they are doing a healthy diet:

“You can think you are eating healthy food, but you still need to track and make sure you are not eating an excess because you will keep body fat on you if you are in a caloric surplus.” (9-3_72-74)

This can take the form of a formal plan. Two LC and EM YouTubers emphasise the significance of and adherence to diet plans for improved health. Adherence to the diet plan is a way to build active dietary awareness:

“Diet is the key to endomorph bodybuilding success. [...] Quantity is more of a problem than quality even if you want to eat reasonably healthy as well. Most importantly, you need a diet plan to stick to.” (9-10_10-15)

Four IF and LC YouTubers expand this awareness to include context. For instance, they explain that a diet is beneficial for some, but not necessarily suitable for everyone:

“If you are 400 pounds and type-2 diabetes, maybe a long fast is good for you. If you are 150 pounds in all muscle and you are worried about performance athletics, the five days fast is not necessarily good for you [...]. So, there is a lot of context.” (1-10_255-259)

Dietary Literacy

Almost all YouTubers assume that their audiences are not familiar with “their” diets. They begin by introducing themselves and then explain why they want to talk about a specific diet, after which they give a little information on the diet itself. Most of the information they provide is related to weight loss, but they stress that awareness of a diet’s features is important to achieve health in general: dietary literacy.

For instance, four YouTubers across the three diet video sets emphasise the intake of natural and wholesome food. One underlines that wholesome ingredients help losing fat faster. Another YouTuber, however, encourages the audiences to focus on the natural and unprocessed food while adding high-calorie foods and high-fat foods:

“While the diet should be focused around natural and unprocessed foods, adding in some higher calorie foods and higher fat foods can help the ectomorph to increase their caloric intake for muscle growth.” (9-2_49-52)

Two LC YouTubers repeatedly mention a balanced diet. One of them stresses that the balanced diet is much more significant than weight loss. She argues that losing weight should have an additional impact on a healthy lifestyle. She argues that if LC made people weak, she’d recommend against it, even if it resulted in weight loss:

“I saw the results. They were nice. Yes, I lost weight, but I could not even fully workout. (...) Eating a healthy balanced diet and workout, weight loss will be a side effect of a healthy comfortable lifestyle.” (8-2_233-238)

Three IF and LC YouTubers highlight the importance of choosing a diet one can sustain. Sugar withdrawal could cause suffering, making it (too) hard to maintain. Six IF and LC YouTubers talk about psychological and physical side effects from adapting to a new diet. They report feeling weak, tired, upset, angry, and headaches. Two of them claim that an addiction to a certain food is the reason why people can get angry and upset:

“Not only do you get a headache, but you feel like you are in an alternate reality or universe, like you do not feel like yourself. Then, you realise that you are addicted to sugar.” (8-1_117-119)

“Why is sugar so addictive? Sugar activates the reward system in your brain that gives you happiness, makes

you feel really good and drugs like cocaine and nicotine do activate the same system as well.” (8-8_16-18)

Quality of Life

Essential features diets are highlighted by IF and LC YouTubers through the prism of QoL. For instance, an IF YouTuber argues that food enjoyment is a critical factor to consistently follow the diet. She shares that consuming her favourite food makes herself adhere to the diet plan effortlessly and that food hedonism helps to stick to the diet plan and thus contributes to overall health:

“I could still eat what I want during the 8 h. I personally think fasting is much easier to stick to and more sustainable in the long term.” (1-5_218-220)

Next to enjoyment, satiation serves a similarly critical role. By consuming high fibre vegetables and good fat, two YouTubers state that people could stay in satiety for a long time. They argue that physical satisfaction is a necessity for health maintenance:

“You may want to have some vegetables that have a little bit more fibre because it is going to allow you to stay satiated for a longer period of time.” (1-6_111-114)

IF YouTubers regularly speak about fasting and the hunger and hunger pains it can induce, especially in the first days of fasting. Five IF YouTubers state that they get used to hunger and change their routines as time goes by. Two other IF YouTubers hypothesise that hunger might come from mental boredom:

“I was not even hungry because I was so busy at work. I think a lot of time to have hunger during your class just comes from mental boredom, your body is actually doing okay.” (1-5_202-203)

Next to the physical sensation of food, three IF YouTubers indicate the value of flexibility. The ability to flexibly arrange diet plans, flexibly arrange meals and meal times would allow an IF diet to actually fit into people’s lives:

“People need to think for themselves and do trials on themselves, like take this information and customize it a little bit to their own lifestyle and needs.” (1-10_764-766)

Where in IF, timing matters most, in LC the qualities of the foods were seen as a potential bottleneck. Two LC YouTubers repeatedly emphasise the significance of food availability and food preparation in advance:

“I find that meal prepping, in general, is really important. If you have prepared food already available to you, you are much less likely to break your diet and snack on something that does not fit.” (8-2_32-34)

Satisfaction of Functional Needs

IF and LC YouTubers offer a variety of statements about functional needs, referring to personal demands and goals. Through dietary changes, the YouTubers want to either improve their health or satisfy specific personal needs, such as improved cognitive activity, sustained energy, to reduce insulin resistance:

“We know that intermittent fasting improves mental clarity because insulin levels are low.” (1-3_76)

“If you learn to watch out for excess sugars in foods that you eat every day all the time, then, you will probably notice that you start to feel so much better, you will have better sustained energy, you will not have many sugar crashes.” (8-4_192-195)

Three IF YouTubers describe that slowing ageing is one of their health goals. According to these YouTubers, fasting evokes an autophagy process which helps people get rid of the old cells and improve the cholesterol profiles. The YouTubers consider reducing the speed of ageing as a health achievement by a diet:

“Autophagy is the process where old cells are replaced by newer cells and it consolidates them into stronger, more powerful efficient cells. So, making your skin glow better, making you live longer (. . .).” (1-6_97-99)

Somewhat closer to home, in dietary terms, three IF YouTubers claim that the digestive system would be overtaxed by whole-day long food consumption. In their videos, they explain that when it does not function properly, the body cannot intake nutrition from food, while fasting - and IF in particular, would improve this. The same goes for insulin resistance:

“When you do a low carb diet, you fix insulin resistance. When you fix insulin resistance, you allow the body to absorb nutrients way more nutrients.” (8-5_47-51).

DISCUSSION

The videos in this study were collectively viewed over 68 million times at the time of analysis. In them, we have identified five key themes to health conceptualisation: weight management, prior dietary awareness, dietary literacy, QoL and SFN. The weight management focus allows diet YouTubers to position health as an achievable goal, a view that aligns with Positive Health’s capability to adapt and self-manage and TDM’s standard level of functioning and adaptation (Huber et al., 2011; Manwell et al., 2015).

The Diet YouTubers in our analysis also stress the importance of assessing one’s own eating behaviour and promote self-awareness when it comes to choosing a diet. They invite their audiences to become both dietary aware and dietary literate, beyond a focus on exercise (Basch et al., 2017). In the process of doing so, they argue that to some extent they perceive health to be

the critical capacity to know about one’s body and context, which approaches notions of Locker and Gibson’s positive health-conscious decisions that prevent disease and promote wellness (Locker and Gibson, 2006). However, conscious decision-making is not the same as dietary self-awareness, since the latter may not lead to the former.

Innovatively, our YouTubers emphasise timing. Timing positions flexibility in life as an IF requirement, which not only enables healthy decision-making, but is also a crucial part of retention success. However, this aspect of health conceptualisation has not been proposed in other studies. Such flexibility extends beyond timing. YouTubers stress food hedonism and satiety, since IF permits their favorite food when timing allows it. These all align with notions of QoL, sensory experiences and joy of life (cf., Bardehle et al., 2016). IF YouTubers position food hedonism as contributing to diet adherence, again under the banner of self-management and adaptation (Huber et al., 2011). Similarly, hunger management contributes to health, as a form of managing malaise and well-being (Leonardi, 2018).

LC YouTubers see weight management as a reflection of an individual health status and the LC diet as an approach to achieve personal goals. They stress the value of setting an achievable goal, congruent with OneHealth (Lerner, 2019). The withdrawal of sugar and carbohydrate, critical to LC, can lead to several side effects. Managing these side effects, similar to hunger management in IF, stressing the capability to manage malaise and well-being (Leonardi, 2018). Discussions of food preparation suggest that planning, such as preparing food well in advance, is a method to reduce the barriers to healthy eating. While such advance arrangements can be understood as management and adaptation techniques, they are not usually discussed as such in literature on health and health conceptualisations.

EM YouTubers mainly discuss physical activity and nutritional intake and encourage their audiences to choose a suitable workout program based on ability and persistence (Lerner, 2019). EM YouTubers interact more with their audiences. They upload videos in response to audiences’ questions. Questions deal mostly with weight and physical activity. The correlation between the numbers of views and numbers of comments is relatively strong in EM videos (see **Supplementary Appendix 1**) and we hypothesize that audiences impact how EM YouTubers conceptualise health in their videos.

Diet YouTubers in our analysis do not use existing conceptualisations of health explicitly. We observed no explicit references or mentions. Rather, they relate to wider social and scholarly movements around how to understand health. Accordingly, they align themselves with various contemporary definitions of health such as Positive Health, OneHealth or TDM far more than with the original WHO definition of health. This fits the preventative instead of a curative role generally assigned to diet and nutrition. Existing developments in shifting health conceptualisations align with the results presented here.

Diet YouTubers in our analysis do not, however, neatly position themselves within these conceptualisations and they offer views on health that move beyond “formal”

conceptualisations. Furthermore, even within notions such as adaptability, self-management and matching goals and capabilities, they forward relatively unique dimensions. When it comes to dietary awareness and dietary literacy, diet YouTubers invite their audiences into explicit self-inspection not only about their health status, but also about what they love to eat. They allow room for manoeuvring within existing health conceptualisations and point it out explicitly. Similarly, planning and preparing food in advance is positioned by LC YouTubers as a way to help design one's surroundings: to make the healthy choice the easy choice.

Our diet YouTubers substitute the WHO's pursuit of a complete state of well-being by an implicit, tacit version of new health concepts. The tacit form allows them to stay practical and to focus on real-world dietary concerns, such as what to eat, how to prepare for meals and how to interweave a life and a diet, a form of dietary internet pragmatics (Xie et al., 2021).

Our YouTubers' conceptualisations of health are intricately connected to their own health literacy. However, the interactions between YouTubers and audiences (primarily in the EM video set) means that they respect the knowledge and position of their audiences. Given that most of our understanding of dietary and health literacy is based upon "older" media and older models of knowledge exchange and dissemination, new platforms such as YouTube, force us to rethink how such literacy is reached, used, and how it develops. We can further learn from the specificity of Diet YouTubers' approach to health conceptualisation. While some of them aim to convince people to adopt the diet they are promoting, most speak to an audience already committed to their respective diets. As a consequence, they do not seek out to convey population-wide dietary advice but rather speak to a specific subgroup in a language that they understand and forward health issues and strategies that resonate with them, instead of pursuing general credibility (Penders, 2014).

This pilot study has a number of limitations worth identifying explicitly. First, we focussed on only three of the top-10 diets and included only English-language videos. Each of these selections

limited our sample and thus the variety of health conceptualisations we could observe. Second, we focussed only on the content of the videos, their producers' conceptualisations of health, not the viewers' perceptions or interpretations. These warrant a study of their own, which would require consultations of these viewers. Finally, by focussing our thematic analysis on concepts of health, various other motivations to participate in dieting have been actively backgrounded in this analysis.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

M-CC: investigation, conceptualisation, methodology, data curation, writing—original draft, writing—review and editing; BP: conceptualisation, methodology, supervision, writing—original draft, writing—review and editing (CRedit roles). All author(s) read and approved the final manuscript.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fcomm.2021.625906/full#supplementary-material>

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