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Professional YouTubers' health videos as research material: Formulating a multi-method design in health psychology

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ABSTRACT

Professional YouTubers are developing a new culture through which they stage health content in pervasive ways. The present article aims to provide a methodological approach to analyse this type of content by adopting a critical perspective in health psychology. To achieve this, we first define our theoretical framework. Second, we formulate a multi-method design combining narrative and visual analyses, as well as automatised linguistic procedures. We then illustrate the potential of our methodology through concrete examples. Implications of this methodology in health psychology are discussed with regard to healthism, a dominant contemporary trend that strongly values the individualised pursuit of health.

1. Introduction

YouTube is a social media that offers its subscribers the opportunity to gain visibility by communicating through video production and display. It has scaled up from a small community of video makers into one of the most influential platforms (Lange, 2007). While gaming, comedy and beauty channels have the highest number of subscribers (Johansson, 2017), lifestyle videos have recently gained in popularity (Carrotte et al., 2015). By presenting how to 'be healthy', 'become healthier' and 'live better', these videos have become particularly pervasive and popular, namely among young females (Carrotte et al., 2015).

YouTube has transitioned from a *User Generated Content* broadcast – with amateur connotations – to *Professionally Generated Content*, supported by an array of commercial strategies (Kim, 2012), defined by user-friendly functionalities and a highly profitable potential (Hou, 2019). This has led to the rise of professional YouTubers¹, a new form of labour where successful user-generated content is financially compensated (Burgess, 2012). YouTubers' professional activity is aimed at reaching large audiences and increase the number of subscribers to their personal channel where a large number of videos is regularly uploaded (Khamis et al., 2017). This activity consists of unique forms of self-mediation as YouTubers share their 'authentic' everyday lives by

building a relationship based on 'intimacy' and 'honesty' with their audience (García-Rapp and Roca-Cuberes, 2017; Thomson, 2017). In the realm of health and lifestyle, YouTubers document through their videos how to lead healthy and happier lives (Khamis et al., 2017). Such content is shown by YouTubers by performing specific everyday behaviours, habits and routines (e.g. cooking, eating, exercising, sleeping) presented within particular life settings (e.g. bedroom, home, car, kitchen, etc.). Also, YouTubers talk in these videos about what they do, how they feel, and what they think of such content.

Alongside the rise of a social media culture based on commercial purposes and where lifestyle YouTubers have become increasingly popular, we need to pay further attention to ways in which YouTubers construct health content promoted in their personal channels, and how these constructions may be shaping meanings attached to health and wellbeing. Certain authors have argued that Western contemporary societies are governed by individualistic logics underpinning neoliberal systems, and that such logics influence health experiences (K. Crawford et al., 2015; R. Crawford, 1980). According to this trend of 'healthism', health is viewed as an individual matter and becomes a life purpose in itself (R. Crawford, 1980). From this 'healthist' perspective, being healthy or unhealthy are regarded as a result of individual behaviours and choices (Riley et al., 2018). Consequently, individuals tend to be held accountable for their own health, regardless of economic disparities

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¹ Throughout the manuscript, we refer to 'professional YouTubers' as 'YouTubers'.

and the embeddedness of their health practices in socio-cultural contexts (Riley et al., 2018). Healthism has become dominant in Western societies thus there is an urgent need to study how this phenomenon may be enhanced by social media.

While the pursuit of health has become even stronger via the expansion of social media and healthism, work in psychology on social media health content has mainly focused on end-consumers. Yet, research aimed at analysing this phenomenon by focusing on health content uploaded by YouTubers remains scarce. The present article aims to develop a methodological approach to analyse lifestyle health-related videos on YouTube from a critical health psychology perspective. More specifically, it will contribute to bridge the gap in the literature by: (1) integrating a theoretical framework that can provide the basis for a methodological approach; (2) formulating an original multi-method design, while presenting potential solutions to the encountered challenges, and (3) illustrating the potential of this methodological approach. Our contributions can orient researchers in health psychology interested in analysing the specificities of health video content facilitated by the contemporary social media culture.

2. Defining our framework: delimiting the phenomenon under investigation

The quality of research in psychology can be enhanced by adjusting the methods to the research goals, that is, by reflecting upon the most adequate means to analyse a given phenomenon (Vygotski, 2003; Willig and Stainton-Rogers, 2008). Chamberlain (2000) has underlined the importance of embracing methods with regard to specific theoretical frameworks and research paradigms that define them. Inspired by Janesick (1994), this author has raised awareness on the risk of 'methodolatry', that is, the dominant use of particular methods by overlooking the research goals or the theoretical foundations (Chamberlain, 2000). Thus, it has been argued that specificities of the research question, field of investigation, and population shall be taken into account in method design (Brinkmann, 2015). Critical health psychologists have therefore encouraged researchers to adapt their methods to given phenomena (Chamberlain et al., 2011; Willig, 2001). From this perspective, researchers are encouraged to practice reflexivity throughout the research process (del Rio Carral and Santiago-Delefosse, 2014; Finlay and Gough, 2003). This implies that researchers should become self-aware of their epistemological, theoretical, and methodological position, as well as underpinning sociocultural values that contribute to shape the phenomenon under investigation. On the basis of these considerations, our study shall embrace three key specificities that define our research topic:

- YouTubers' health content framed as 'health practices' (e.g. eating, drinking, resting) which are socio-culturally embedded (del Rio Carral and Lyons, 2020; Hargreaves, 2011). These health practices are staged by YouTubers as integrative parts of everyday life (e.g. 'my morning routine', 'a day in the life', 'my healthy habits'); take place in specific settings (e.g. bedroom, living room, kitchen), and engage materiality (e.g. saucepan, vegetables, candle, yoga mat).
- The participatory social media culture with specific affordances (e.g. participatory logic, YouTube conditions of use, commercial purposes). This includes self-mediation (Khamis et al., 2017) given that content ise performed and narrated by YouTubers themselves (as opposed to what certain scholars refer to as 'naturally occurring' data (Knoblauch, 2009, p. 181)).
- The multi-modality of YouTubers' video content, including speech (telling a story), audio-editing, (e.g. music), and visual content (e.g. sequences of illustrations, activity, graphics).

2.1. YouTubers' health content framed in terms of 'health practices'

Social practices theory has recently conceptualised the links between

individual behaviours and broader social structures, by viewing health behaviours as contextualised, socially shared practices (Meier et al., 2018; Reckwitz, 2002; Shove et al., 2012). This framework highlights the importance of analysing social practices as part of life contexts (Blue et al., 2016; del Rio Carral and Lyons, 2020). According to social practices theory, health practices are socio-culturally embedded activities that take place in everyday life. They engage affectivity, interactions, materiality, and forms of institutional organisation (Hargreaves, 2011). Individual behaviours are viewed as part of broader patterns of shared social practices; therefore, people tend to act according to meanings shaped by sociocultural discourses (Reckwitz, 2002). Available for a given social group, the latter can induce normalised ways of acting within specific contexts (Hargreaves, 2011). These practices are not completely rational; they include an affective and non-premeditated dimension that can entail change (Giddens, 1984).

While this theory has shown its potential in analysing health practices among given social groups (e.g. del Rio Carral and Lyons, 2020), further research is required to understand health practices performed in the media culture by YouTubers. While their practices are deemed to be 'authentic' and reflecting their own everyday life, they are also staged through self-mediation for visibility purposes. This calls for an in-depth understanding of the social media culture and its broader societal context. In the next paragraph, we describe recent work in social sciences having greatly contributed to such understanding.

2.2. The YouTube media culture and new forms of self-mediation by YouTubers

YouTubers' activity has been explored in terms of its contribution to a recent media culture, in which YouTubers are provided with a space for product-placement and advertising, aimed at influencing viewers' choices and behaviours (Thomson, 2017). Performative acts by the YouTuber persona are essential ingredients to create a connection with the viewer (Pereira et al., 2018). Authenticity and intimacy (Abidin, 2015; Raun, 2018) are two key concepts used to define the exclusive relationship that YouTubers wish to establish with their audience. This relationship is constructed through codified practices and narratives on the self under the form of story-telling (Dreon et al., 2011; Scolari and Fraticelli, 2017) and advertorials (Abidin, 2013). Existing research in disciplines including sociology and marketing has provided critical in-depth analysis of video content, such as beauty categories with regard to the cultural premises underlying YouTubers' videos, and how these relate to broader postfeminist discourses (Bevan, 2017; García-Rapp, 2017)

In the lifestyle YouTube category, narratives on the self in YouTubers' videos are most manifest through health-related practices including sleeping, eating, and exercising (Abidin, 2013, 2015). Through their activity, these YouTubers follow a highly codified visual aesthetic achieved through expert video-editing (Pereira et al., 2018). YouTuber videos on how to 'be healthier' and 'live better' are most popular (Carrotte et al., 2015, p. 13). With few exceptions (e.g. J. Harris, 2019; Ratwatte and Mattacola, 2019), there is scarce literature on ways in which health practices are constructed in these videos nor on how health may be reshaped by this media culture.

Critical health psychology provides appropriate concepts and tools to address the complexity underpinning experiences on health by examining meanings attached to them (Lyons and Chamberlain, 2006; Willig and Stainton-Rogers, 2008), while analysing stories as socio-culturally embedded narratives (Murray, 2003). With regard to YouTubers' videos more particularly, this field has the potential to take into account materiality (e.g. settings, spaces, objects) and life contexts, including everyday life (e.g. the YouTube culture, social embeddedness of practices) (Reckwitz, 2002). This complexity remains relatively unexplored from a methodological standpoint.

2.3. The multi-modality of YouTubers' video content

Digital spaces have long been an area of interest among social scientists, who have investigated how people engage in a variety of online social practices. The specificity of this body of research is a focus on 'natural' data, consisting of visual material that has not been produced for research purposes and where participants' behaviour is independent from researchers' activity (Schnettler and Raab, 2008). Online ethnography or 'netnography' (Kaur-Gill and Dutta, 2017) uses participant-observation techniques to study online interactions and uses online interview techniques (Marshall, 2010). Certain studies have paid attention to online communities such as blogs, allowing for the collection of valuable information regarding in-group dynamics through digital ethnography (Brotsky and Giles, 2007). Other studies in the human-computer interaction literature have explicitly studied user practices in YouTube health videos using digital ethnography (Huh et al., 2014).

The rise of technologies aimed at video-production have led to a variety of visual digital material. An important body of research in human and social sciences has developed methods for visual data analysis (Schnettler, 2013). Qualitative research has expanded mainly within sociology and anthropology through an array of approaches inspired by forms of social constructivism.

Visual Data Analysis (VDA) targets visual analysis of behaviour by identifying markers on emotions (e.g. through facial expressions) and social interactions (verbal and non-verbal exchanges) with people and objects (Nassauer and Legewie, 2021). Moreover, Interpretive Visual Analysis (IVA) (Knoblauch, 2009) and Multimodal Interaction Analysis (MIA) (Norris, 2012) both use action or interaction as a key unit of analysis. IVA and MIA are interested in social interactions, inspired by forms of conversational analysis, where language is viewed as performative (Sacks, 1992). Rooted in social phenomenology (Berger and Luckmann, 1966; Schütz, 1967), IVA adopts a hermeneutic approach to study the visual and spoken dimension of social interactions in work environments such as medical encounters (e.g. Knoblauch, 2006). It focuses on complex networks of social actors participating to co-construct social realities. Social actors are defined as: people, cultural tools, gestures, objects, and environments (Knoblauch, 2009). Video is used as a means to collect data and researchers become active agents in their interpretation of visual material. MIA has been referred to as a holistic methodology with the potential to study cultural tools such as language, objects and gestures, as well as their interaction with environments and materiality (Norris, 2012).

VDA, IVA and MIA have greatly contributed to the understanding of digital and visual material, alongside technical advances in video recording. They provide valuable information to understand the key role of social actors, cultural tools and materiality in online and offline social realms. These approaches have also highlighted the active role of researchers in the collection and analysis of videos and the importance of acknowledging researchers' interpretations as part of the research process. Inspired by these elements, the present study mobilised existing methods as a starting point to embrace our topic within a critical health psychology perspective. To do so, we designed an original approach to examine meanings attached to YouTubers' performed health practices and rooted in a media culture, part of a broader societal context. We adopted a social constructionist perspective (Burr, 2015; Engeström et al., 1999) interested in ways in which people actively engage in the (re)production of meanings through language and activity (Vygotski, 1997). Language is conceptualised as a major cultural system that enables people to make sense of the world, others, and the self (Murray, 2003; Vygotski, 1997).

3. Formulating our methodology from a critical health psychology perspective

Once having defined the theoretical framework, we describe key

methodological, ethical and practical aspects that were addressed in an ongoing study on YouTubers' health videos.

3.1. Adopting an active research posture of 'bricoleur'

In critical health psychology, researchers have been invited to act as 'bricoleurs' by becoming aware of epistemological, ontological, and theoretical decisions to be taken throughout the research process (Chamberlain, 2000; Willig and Stainton-Rogers, 2008). In our study, we acknowledged the active role that researchers inevitably play in the construction of the research process (del Rio Carral and Santiago-Delefosse, 2014; Vygotski, 1999). This posture is coherent with neighbouring approaches where the researcher adopts an active role, namely that of IVA (Knoblauch, 2009; Schnettler and Raab, 2008) and VDA (Nassauer and Legewie, 2021).

Moreover, critical scholars have urged researchers to further develop study-tailored strategies to move beyond mere data description and to allow for further interpretation (Brinkmann, 2015). Willig (2000) has previously highlighted the limits of static, descriptive methodologies, especially when exploring the multifaceted and often contradictory character of health experiences. According to her, more dynamic methodologies are needed, for example by taking into account the concrete practices. As critical health psychologists and 'bricoleurs', we thus analysed YouTubers' video content in terms of health practices (Blue et al., 2016) to examine what meanings are associated to such practices and, foremost, how such meanings are constructed (Willig, 2000).

3.2. Defining a tailored multi-method design

To formulate our methodology, we considered the following elements: a) health content channelled by YouTubers through their videos; b) ways in which YouTubers talked about health practices presented in such videos; c) concrete settings where practices took place, including materiality and, d) sociocultural logics shaping such content (e.g. healthism). On such basis, we defined an original multi-method design defined by two stages.

The first stage addressed two questions: 'What are the health practices performed by YouTubers?' and 'How are such health practices constructed and presented?'. This stage aimed at the interpretation of verbal and visual dimensions of health videos from lifestyle YouTubers. It implemented narrative and visual methods of analysis upon a selection of fifteen videos.

The *second stage* examined the question: 'How can the exploration of a large amount of lifestyle videos by YouTubers support our qualitative analyses?'. Aimed at illustrating the qualitative outcomes, we conducted automatised analyses upon a large number of videos based on transcriptions of YouTubers' speech (50 YouTubers with 50 videos each, a total of 2500 videos).

Our multi-method tailored design raised several ethical and practical challenges that we address here below, to then proceed to illustrate its potential.

3.3. Ethical and practical challenges: useful considerations

Social media platforms as YouTube remain relatively recent territories for psychological research, and 'good practices' in leading this kind of studies are still under construction (Germain et al., 2018; Patterson, 2018). In 2017, the British Psychological Society (BPS) published a set of ethical guidelines to support researchers in psychology to develop internet-based studies, highlighting five key principles: Respect for the Autonomy; Privacy and Dignity of Individuals and Communities; Scientific Integrity; Social Responsibility; Maximising Benefits and Minimising Harm (British Psychological Society, 2017). When focusing on YouTube, it is important to integrate these principles and align them with the research question and the platform's functionalities. Nonetheless,

several ethical and practical challenges remain when proceeding to their concrete implementation. Below, we present suggestions that can be useful to address ethical and practical issues raised by copyright protection, recruitment and data collection, participants' consent and confidentiality.

a) Copyright policy for research on YouTube videos

The first encountered challenge was the major difference across YouTubers' videos regarding whether they allow for video replication or not. Indeed, the analysis of YouTube content may require uploading – thus copy or reproduce – some or all of the video material (e.g. images, sound, close-caption). The legal framework of YouTube videos is constituted by the Creative Common Licenses and the country' specific legal context. Creative Commons Licenses (CCL) give creators a standardized way to grant the public permission to use their work under copyright law ('About CC Licenses', n.d.; *Creative Commons Legal Code, n. d.*). YouTube offers the possibility to post videos on a standard license or on a CC-BY license, allowing for the copy and reproduction of online content (YouTube, 2019a).

It is important to consider what type of digital content may better correspond to the study's research question. For instance, while the Creative Commons Licence videos can be downloaded and used freely, they may not be representative of the type of content that is mostly watched on the platform. Furthermore, regulations on the reproduction (e.g. downloading) of copyright material for research projects depend on the platform's guidelines and on national legislations, which can change from a country to another. It is hence advisable to seek for ethical and legal advises from institutional experts, to adjust the research design to the copyright framework.

As our investigation was conducted in Switzerland, the legal context allows for the reproduction of copyright material for research purposes (Loi sur le droit). Thus, we collected both CCL and non-CCL content and downloaded subtitles via automatically generated close captions. Our research protocol (C_SSP_012021_00001) was approved by the 'Research Ethics Commission of the University of Lausanne' (CER-UNIL).

b) Recruitment and data collection

Socio-demographic information on YouTubers is difficult to access (Barker, 2019), yet inclusion criteria shall still be established on the basis of their relevancy to the study's research question. Inclusion criteria to be considered are: the YouTubers' language, age, number of subscribers, registration country and types of associated licenses, and other elements related to video-production.

Furthermore, while YouTubers' videos are publicly available online, their access is framed by an array of complex factors that are context and user-dependent, especially with the available algorithmic services such as RSS. It has been argued that 'you do not look for the data. The data find you' (Lash, 2006, p. 580). In fact, the researcher's age, gender, geographical position, the use of cookies, the browsing history affect the videos that YouTube will show (Barker, 2019). Best practices should therefore acknowledge the researcher's posture while collecting digital data. In practice, two options can be considered. According to the first one, researchers can decide to embrace the 'algorithmic fate' and analyse the data associated to their digital identity, for example through 'snowball' data-collection (i.e. being guided from one video to the next according to YouTube's suggestions) (Hou, 2019). The second option consists of decreasing the influence of YouTube's recommendations through rigorous keyword-based search (Anthony et al., 2013; Barker, 2019). This second type of data collection method allows to identify which channels broadcast specific content and to reach saturation within a relatively wide and diversified video-sample. Through this process, it is possible to access videos that are not necessarily recommended to the user (the researcher) through YouTube's algorithm-based

suggestions. A concrete example of taking a manual keyword-based approach on the YouTube search engine on health content would entail creating a specific keyword list and each word would then need to be tested in the search-engine of the platform (Anthony et al., 2013). Such list requires regular revision, until no further relevant results are found

c) Participants' consent

On YouTubers' videos the borders between 'private' and 'public' are often blurred, as the platform allows for a new kind of performance where the self and daily activities have become 'public' through vlogging (Gamson, 2011). The public and private dimensions are continuously negotiated by YouTubers themselves in their video content, where intimacy is a key component of the subscriber-YouTuber relationship in spite of the public character of the interface (Lange, 2007). According to the definition of 'public content' provided by the BPS (2017), YouTube videos are not to be considered as 'private content'.

The uploading of 'publicly available' material online does not necessarily imply an agreement of use for research purposes (Legewie and Nassauer, 2018) and researchers may face the dilemma on how to conceptualise consent in this digital setting. Participants' consent should not be overlooked. Thus, it is strongly recommended that YouTubers are informed on the use of their videos for research purposes, as well as their right to ask any questions concerning the research. Given that You-Tubers are highly solicited, we advise to write a simple, clear, brief email, as well as send regular email reminders to maximise the chances of receiving a reply with regard to consent. In our study, 214 CCL and non-CCL YouTubers were contacted: 180 did not respond and 34 gave their explicit consent (16%). Both 'opt-in' or 'opt-out' requests for study participation are both acknowledged strategies in digital media. However, opt-in requests are likely to hinder the research process, as there is a significant risk of not being able to conduct the research due to lack of responses. Even when offering a financial compensation, opt-in methods may still achieve low response rates (Anthony et al., 2013). Regardless the decision taken, the rationale underpinning such decision should be mentioned in an ad hoc ethical application prior to the study. Finally, some participants may choose to withdraw from the study once the data collection has been completed. Following best practices on post-participation withdrawal (British Psychological Society, 2017), raw data gathered prior to their decision should be deleted from the database.

d) Confidentiality

YouTube does not guarantee any confidentiality with respect to content posted (YouTube, 2019b). As YouTubers' aim is to attract a larger number of viewers, some may wish to be cited. This is why participants in our study were offered the possibility to decide if they wished to be acknowledged. However, common practices in psychology require that participants' identities are coded. Any information on participants' identity should not be made public. Germaine and colleagues (2018) have suggested the use of 'Google-proofing' verbatim quotes to verify whether the internet-search engine may lead a lay web-user to a given YouTuber's identity. We thus recommend that all direct quotes are paraphrased as an additional means to protect their identity, as we did in the present research.

In the next section, we describe in detail the two-stage multi-method design that we implemented in our study. The potential of each of these stages will be illustrated by using concrete examples from this study.

4. First methodological stage: narrative and visual analyses of YouTubers' health video content

Scholars have pointed out that research data, including verbal and visual material, are culturally and socio-historically rooted (Murray,

2003; Rose, 2016). Research material stemming from YouTubers' content is no exception. Based upon this premise, the first stage of our multi-method design implemented narrative and visual analyses. This stage paid particular attention to the analysis of meanings attached to health practices in order to understand ways in which these were shaped by YouTubers' activity and the social media culture. We focused on the verbal and visual dimensions of such content to examine *who* were the main characters in YouTubers' health videos; *what* was being said, performed and displayed, and *how* such content was performed.

4.1. Narrative analysis: YouTubers' accounts viewed as stories

The narrative approach has been used in health psychology to understand experiences of health and illness. It is based on the premise that individuals have the need to make sense of their world and themselves through storytelling or narratives, which can be personal, interpersonal and social (Murray, 2003). On YouTube, YouTubers tend to structure their accounts as 'stories' using self-presentation and self-mediation communication styles (Chou et al., 2011). The narrative approach seemed particularly appropriate in our study, given this mode of delivering autobiographical content (A. Harris et al., 2014; Raun, 2018).

Inspired by Murray (2003), we conducted a narrative analysis across a selection of fifteen videos. A descriptive phase was first conducted to identify the parts and plots of each story. A more interpretative phase was then applied to examine what content was presented and how the video narratives were structured:

- The descriptive phase consisted of a summary of 'life-chapters' told by YouTubers. Here, we identified main overarching plots and divided them according to a 'beginning', 'middle' and 'ending'.
- The interpretive phase was implemented to highlight which health topics were explained by YouTubers as well as their narrative structure: the logic and overall tone; the relationship between personal, interpersonal and sociocultural dimensions of narratives. In this process, we examined how experiences told by YouTubers related to broader societal logics.

4.2. Visual analyses: YouTubers' 'visual narrative compositional style'

Following Rose (2016), visual data analysis needs to be tailored to the research material's own technological, compositional, and social modalities, along with the research goal. On YouTube, storytelling is constructed through the narrative dimension, as well as music and visual editing (Scolari and Fraticelli, 2017). YouTubers' audio-visual narratives are performances aimed at being delivered to an audience (Barker, 2019) following a script and conveying a specific cinematic style. To address the staged character of this content, we conducted an analysis aimed at the understanding of what we refer to as YouTubers' 'visual narrative compositional style'. This was achieved by first identifying the main visual themes and by then examining the narrative structure and compositional style of these themes:

- Inductive thematic analysis: We drew upon 'polytextual thematic analysis' to conduct an inductive thematic analysis to classify main recurring visual themes (Gleeson, 2011). Gleeson proposes a systematic approach to visual analysis of static data that is highly similar to the inductive thematic analysis of verbal data used in health psychology (Braun and Clarke, 2006). She defines it as 'the analysis of visual data that looks across sets of images and tries to capture the recurring patterns in the analysis, both in terms of form and content' (2011, p. 319). In our study, we applied a frame-by-frame procedure, previously applied in similar methodological approaches for visual data (e.g. (Nassauer and Legewie, 2021).
- Analysing the visual narrative compositional style: This analytical procedure drew upon theoretical premises stemming from film studies

(Sikov, 2020), psychology (Rose, 2016) and sociology (Knoblauch, 2009). Its aim was to address common challenges related to video analysis. These included the combination of visual narration, music and audio adds-on (Schnettler and Raab, 2008), as well as the analysis of meanings attached to visual content within a social media culture (Anthony et al., 2013; Pereira et al., 2018). We elaborated a tailored grid to analyse YouTubers' visual narrative style through the identification of: the characters in each video-shot and how these were portrayed (characters); the staging or mise en scene including how the setting was displayed (setting) and, finally, what the characters were doing throughout a whole video sequence (health practices). Additionally, attention was paid to compositional elements constituting the filming style and the visual logic (shot's goal and scale; editing techniques; on-camera vs. off-camera look). Here below (Table 1), we summarise main elements included for the visual narrative compositional style, once the main visual themes were identified:

In this first stage, the narrative and visual analyses echoed one another, as they converged to point out strikingly similar yet, complementary results that we exemplify here below.

4.3. Illustrating the potential of our narrative and visual approach

This section illustrates the potential of the first stage by presenting preliminary findings based on the narrative and visual analyses of one of the videos selected. In this video YouTuber M^2 is the main character, presenting practices to lead a healthier life by providing advice on the implementation of nutrition habits.

The narratives are characterised by an overall optimistic tone. The overarching plot of leading a healthier life is constructed throughout the video: in the opening scene YouTuber M describes her 'unhealthy' past self (beginning of the story), who implemented specific lifestyle changes (middle of the story) to feel healthier and happier and has now achieved the desired results (end of the story). Her future-oriented progressive

Table 1Analytical grid to analyse narrative and compositional elements of YouTubers' visual content.

Dimension	Elements	Indicator
Visual narrative	Characters	YouTuber as main character; presence of other people or pet; physical appearance, make up and clothing style.
	Setting	Colour palette, objects and things, space layout, furniture, decoration.
	Performed practices	Food preparation; practicing yoga; running; house-cleaning.
Compositional style	Shot's goal	Decoration setting; ground for action; graphic display of information (titles and links).
	Shot's scale	Long shot; mid-shot; close-ups.
	Editing	Changes in speed; music-additions; video- trailer; visual adds-on; sound effects; colour filtering.
	Characters' glances	On-camera vs. off-camera look

² A note on gender pronouns: as earlier stated, YouTubers' sociodemographic data are very difficult to find. In our sample, YouTubers did not explicitly make reference to their gender. In this article, we made assumptions on YouTubers gender identity based on the content of their videos, while taking into account the digital identity of the researchers (females). We are aware of the fact that this lack of information constitutes a limitation that ought to be better explored in future research. For the purpose of this study, YouTubers in our sample are referred to as "she/her".

narrative structure is meant spontaneous and authentic, fostering a horizontal relationship with viewers.

Regarding the visual dimension, a mid-shot shows YouTuber M facing straight to the camera, speaking to an audience from her home setting. The latter consists of a bright, colourful yet uncluttered and sober space, suggesting that healthy behaviours can lead to a new lifestyle. YouTuber M displays a youthful look engaging her body. The person wears clean and apparently new sport clothes, light make up, and tidy hair.

Health practices are constructed through meanings involved in both, narrative and visual dimensions. More specifically, as the video starts, YouTuber M is in her private bedroom, sitting on her bed. Through a mid-shot of herself glancing on-camera, she explains that a few years ago, she had started a journey towards a healthier lifestyle and that she has progressively been improving different areas of her life, until reaching happiness and wellbeing. She further develops several substories, talking about an array of personal experiences. For example, she addresses eating practices to show that she enjoys preparing her own food since she has avoided 'refined sugars' and 'processed food'. She describes that this eating practice makes her feel healthier as well as a better person.

As the story unfolds, YouTuber M appears through a mid-shot alone in her clean, organised, pastel-colour kitchen, preparing a vegetarian meal. An uplifting music accompanies food preparation stages, and fast-forward editing leads the viewer to quickly see the finished colourful vegetable-based meal, suggesting what is meant by this YouTuber as 'healthy' eating. Here, the narrative dimension enhances YouTuber M's purpose of becoming healthier through the food she eats, how she prepares it, how she eats it, and how that eating that food makes her look and feel (Images 1 and 2).

At the end of the video, this YouTuber encourages her audience to share their opinion in the video's comment section, and to affiliate with other social media channels presented through graphic links and addson. While the video has started with a specific focus on her personal experience, highlighted by a specific terminology (framing this as 'in my experience', 'my journey', or 'personally'), YouTuber M progressively engages the viewer in her speech through wordings such as 'you can change your life' or 'you will feel amazing'. The closing scene uses an interactive tone with her viewers to elicit their reactions and comments.

Throughout the video, broader societal values of self-responsibility and self-care underpin YouTuber M's personal story. YouTuber M speaks about a specific reward that can be achieved by following her advice, that consists of 'reaching happiness' alongside a health-*ier* life. Self-improvement constitutes another implicit logic constructed at narrative and visual levels. This logic is conveyed by showing seemingly simple, easy, and effortless ways to implement healthy practices, namely based on individual will.

Based on this analysis, we showed that narrative and visual analyses can lead researchers to produce refined interpretations on YouTubers' videos content from a critical health psychology perspective. This first



Image 1. Figure inspired by YouTuber's practice of 'healthy eating'.



Image 2. Figure inspired by YouTuber's practice on 'staying hydrated'.

methodological stage has the potential to provide insight on ways in which YouTubers' videos contribute to shape health and health practices via YouTube. Moreover, it allows for the study of healthism as intimately linked to the moral value of 'becoming a good person', alongside positive states of mind ('being healthy' = 'being happy'). An exploratory analysis was conducted through a second methodological stage to support our qualitative interpretations.

5. Second methodological stage: computer-based procedures of video exploration

The second stage of the multi-method design involved the use of computer-based methods applied to transcriptions of the speech content from YouTubers' videos. In this section, we describe the type of analysis that can be conducted to complement the first stage with two examples: (1) How YouTubers talk in their videos, by quantifying the verbal content of their full set of videos; and (2) how this analysis can be refined to understand temporal aspects of verbal content production.

As the starting point, used the Linguistic Inquiry and Word Count (LIWC) tool, specific to the linguistic study of psychological dimensions (Pennebaker et al., 2015). We employed the LIWC2015, the most recent version of this tool, to analyse speech transcripts from 50 YouTubers (50 videos per YouTuber). LIWC2015 uses an internal default dictionary, which contains a list of categories and their corresponding words. Each of the LIWC2015 categories is composed of a list of dictionary words that come from a set of 6400 words and word stems. For example, the positive emotion category ('Posemo') has 620 words (e.g., love, nice, sweet, etc.) while the negative emotion category ('Negemo') has 744 words (e.g., hurt, nasty, ugly, etc.

Based on the total number of existing words in each category of the transcript, we calculated the percentages of all LIWC2015 categories. This value represents the sum of matched keywords for the total number of words that a YouTuber produced in their videos. The outputs of LIWC2015 on the downloaded transcripts summarised YouTubers' verbal content with respect to a number of relevant linguistic categories in psychology research (Pennebaker et al., 2015). Image 3 shows, for example, that the first person of the singular ('I') is used more frequently than the second person of the singular ('You'), but also more frequently than the first person of the plural ('We'). Furthermore, it shows that positive emotions ('Posemo') are more frequently expressed that negative ones ('Negemo'). Similarly, the present tense is used more often compared to the past or future. These results are interesting since they add value to findings of the first methodological stage of the analysis. First, they point out a tendency by YouTubers to narrate from a personal perspective and engage the viewer through interactivity ('I' and 'You'). Second, based on their wording, YouTubers' narratives are characterised by an optimistic tone of health and wellbeing. This kind of analysis is a first step used in our computer-based methods to explore the linguistic content of videos.

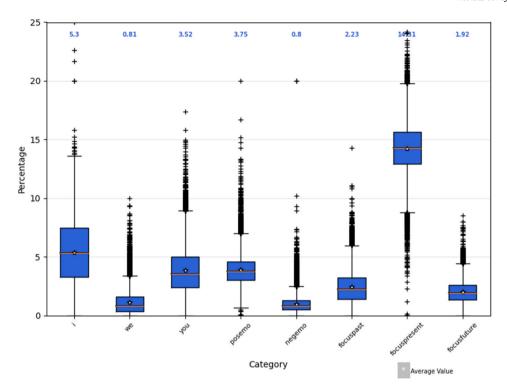


Image 3. Percentage of some LIWC2015 categories in YouTube speech transcriptions.

As second illustration, given the temporality (video length) of speech transcripts, we combined the LIWC2015 categories with the timeline to analyse how YouTubers produced verbal content. To do this, we calculated the distribution of the corresponding words of LIWC2015

categories over the video length. In Image 4, we provide examples of LIWC2015 categories including pronouns ('I', 'We', 'You'), time orientations ('FocusPast', 'FocusPresent', 'FocusFuture'), and emotions ('Posemo', 'Negemo'). Image 4 (a) shows that 'We' and 'I' are used more

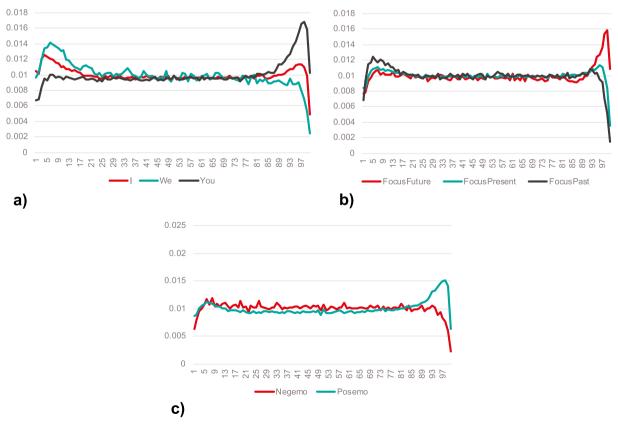


Image 4. Examples of LIWC2015 categories in timeline with (a) pronouns, (b) time orientations, and (c) emotion.

commonly than 'You' at the beginning of videos. In contrast, 'You' is more frequently used compared to 'I' and 'We' in the video conclusions. Image 4 (b) highlights that a focus in the future is more frequent towards the end of the videos. Image 4 (c) stresses that positive emotions are more frequent towards the end of the videos. These results show common speaking styles among YouTubers, who craft their messages to have an effect on their audiences.

While LIWC-based analysis of YouTube video blogs is not new (Biel et al., 2013), its application to health lifestyle videos of YouTubers brings a novel angle. This second stage supported our narrative and visual analyses by shedding light upon main features characterising videos, such as: the specific use of words throughout a temporal framework, the overall optimistic tone and the trends associated to pronoun use. Through automatised methods of video exploration, outcomes stemming from this method enhanced interpretations regarding narrative and visual analyses, bringing an added value to our research. From a critical health psychology perspective, contextualisation of such content is nonetheless required. Therefore, computer-based analyses were interpreted in light of the first stage.

6. Discussion

This article aimed at providing a methodological framework to analyse lifestyle health-related videos displayed by YouTubers from a critical health psychology perspective. To do so, we focused on the analysis of verbal and visual dimensions of YouTubers' video content. Also, we reflected upon potential solutions to key methodological challenges that we encountered in data collection and analysis. Moreover, we illustrated the potential of our methodological approach.

Our first contribution consisted of the integration of a critical health psychology perspective to examine YouTubers' lifestyle and health video content. To do so, we conceptualised YouTubers' staged practices as rooted in the social media culture, part of a broader societal context. We drew upon social practices theory (Blue et al., 2016; del Rio Carral and Lyons, 2020) and recent work that defined YouTubers as a new form of labour structured by social media's specific values and affordances (Khamis et al., 2017). Through the study of contextualised health practices and their meanings, our framework has the potential to examine the articulations between personal narratives and sociocultural discourses. It suggested that the media culture is deeply rooted within specific logics that promote forms of individualism and self-surveillance (Ashman et al., 2018; Chae, 2019; Khamis et al., 2017). In line with this, recent work in critical health psychology (Riley et al., 2017, 2018) led us to examine healthism (Crawford, 1980), a dominant trend where health is oriented towards neoliberal logics.

Our second contribution was the development of a tailored multimethod design. We showed the need to integrate an active research posture in the interpretation of data (del Rio Carral, 2014; Finlay and Gough, 2003; Vygotski, 1999). In this context, it was imperative to introduce reflexivity in the exercise of 'zooming out' from our own contemporary societal values to adopt a certain distance with regard to our topic of investigation. Researchers are therefore invited to become 'bricoleurs' to be aware of epistemological, ontological and theoretical decisions taken throughout the research process (Chamberlain, 2000; Willig and Stainton-Rogers, 2008). Ethical issues on participant consent, anonymisation, study withdrawal, and copyright are still subject to debate, yet central to study of YouTubers' activity. In our study, we presented practical suggestions to address common challenges. Our reflections constitute a first step for further development.

In addition, we addressed the complex multi-layered data involved in lifestyle YouTubers' activity. We examined *what* health practices were presented and *how* such health practices were displayed. This study provided insight to adapt existing methods of data analysis to go beyond video description. While important, descriptive analyses are not sufficient to understand how health practices and other health-related phenomena are constructed and experienced (Willig, 2000).

The first methodological stage addressed self-mediation, a major feature of YouTubers' style of communication (Khamis et al., 2017) by examining accounts as 'stories' (Murray, 2003). This focus was complemented by the analysis of a 'visual narrative compositional style' through a tailored grid. Social practices' theory (Blue et al., 2016; Reckwitz, 2002; Shove et al., 2012) has underlined the importance of taking into account settings, objects and materiality and our grid constitutes an attempt to achieve this.

The second methodological stage, based on computer procedures of video exploration, was helpful to shed light on YouTubers' linguistic content to support our qualitative analyses. More particularly, it allowed us to further explore the overall optimistic tone of YouTubers' speech with regard to health, for example through the predominance of words referring to positive emotions. Based on this kind of illustration, the second stage underlined the pertinency of qualitative interpretations associated to our narrative and visual analyses.

Our multi-method design has certain limitations, namely with regard to the epistemological articulation between the qualitative and computational stages. Additionally, our methodology fails to consider viewers' comments. Despite these limitations, our approach can be useful to analyse health content in YouTube. While it remains evident that no 'one-size-fits-all' methods can be defined (Brinkmann, 2015), our contributions may inspire health psychologists interested in how social media are shaping our understandings of health in everyday life.

This study has several research implications, as it has highlighted articulations between healthism (R. Crawford, 1980) and motivational and positive discourses on self-development. This is in line with recent poststructuralist work arguing that individuals who engage in health behaviours are viewed as 'good citizens' in industrialised Western societies (Gill, 2007). 'Staying healthy' has become a purpose in life that encourages individuals to become self-responsible, often through self-monitoring (K. Crawford et al., 2015; Lupton and Smith, 2018). Critical scholars in health psychology have pointed out the potentially negative repercussions of such discourses upon people's overall wellbeing (Riley et al., 2018). Hence, we need to better investigate the potential consequences for those who fail to identify to these logics (Riley et al., 2018) as well as for those who engage in counter-practices (Raun, 2018; Riley et al., 2017). The complex interactions between healthism and neoliberalism are central processes defining our times. YouTube appears as a major platform producing and reproducing such interactions. Research perspectives could focus on these interactions from lay populations' point of view. Indeed, the commercial yet personal relationship that YouTubers engage with their viewers is cultivated through forms of consumer-participation, where the latter are invited to comment and subscribe to YouTubers' channels (Khan, 2017). The role of viewers and subscribers' comments in the co-construction of such culture (Bevan, 2017; Khamis et al., 2017; Marwick, 2015) also deserves attention in future research, such as how this may be gendered (Bevan, 2017). These directions would contribute to the understanding of ideals of a 'healthy' life and how these are reshaping experiences around health and wellbeing.

Authors' contributions

The third author conducted the video selection, under the supervision of the first author, and contacted the included YouTubers for their consent to participate to our study. She helped with practical and ethical issues raised by the study. The second author conducted a revision of the video selection and led the first methodological analytical stage, under the supervision of the first author, with the support of the third author. The theoretical framework and methodology was developed by the first and fifth author, with the support of second and third author on pratical issues regarding analysis and methodological design. The fourth author conducted the second methodological analytical stage, supervised by the fifth author and supported by the second and third authors. The multimethod design was further developed, defined, modified and adapted

by the first, second, third, fourth and fifth authors in a collaborative way.

Conflict of interest statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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