Climbing Up the Algorithm:

Female fitness creators and their visibility management on YouTube

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Abstract:

Over time, the online digital environment has experienced a massive growth in content and users, which makes it more challenging to become noticed online. Within this environment, social media platforms have become a destination for people to become creators. YouTube is a dominant tool for creators to establish themselves by publishing videos in order to gain an audience and connect within their community. For female fitness creators, YouTube serves as a core platform for publishing workouts and earning an income, which for some is a full-time job while for others it serves as side income. Due to the COVID-19 pandemic, the fitness industry experienced a heavy impact as a result of businesses closing down which led many female fitness professionals to turn to YouTube and other social platforms to continue their profession, although some were already immersed and dedicated to a fully online career. The online fitness realm faces a salient challenge of saturation of fitness creators and content, which makes it difficult to become noticed in a sea of creators. This challenge is tied to YouTube's algorithm as it plays a key role in determining the served content to users. The community of female fitness creators on YouTube has garnered minimal academic research and exploring the connection of these creators to the management of visibility with YouTube's algorithm is not known. Thus, the objective of this study is to explore the following research question: *How do female fitness creators manage their visibility with YouTube's algorithm?* In order to gain insight into female fitness creators, this research consisted of a mixed-method approach with 12 qualitative interviews, a participant observation and a computational network analysis. This combined qualitative and quantitative research explores the role of female fitness creators, connected communities through the use of a keyword, and how YouTube's algorithm is navigated in order to manage visibility. Female fitness creators revealed their experience and the elements involved in their role that contribute to how they manage their visibility. There are practices and strategies implemented as well as varying understandings of YouTube's algorithm which are influenced through algorithmic gossip and other creators. The creators emphasize how algorithmic bias can be experienced from a hiatus or lack of activity which can inhibit your visibility. This research fills the academic gap by contributing insight into how female fitness creators manage their visibility with YouTube's algorithm especially with the incontrollable growth of the online realm. Furthermore, the findings of this research imply that the management of visibility from female fitness creators is not only applicable to their category, but to all creators online who strive to gain visibility.

<u>Keywords</u>: *creators, algorithms, fitness, YouTube, visibility*

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1. Introduction

As the COVID-19 pandemic spread across the globe in 2020, the fitness industry was one of the most impacted businesses. With gym and sports centers closed, many people turned to online fitness in order to maintain their routine and well-being. At the beginning of the pandemic, the Australian female fitness creator Chloe Ting exploded in popularity across social media due to her viral ab workout which currently has more than 350 million views on YouTube (YouTube, 2021). During this unprecedented time, her workouts became a viral sensation on TikTok which drove her YouTube channel to grow from 2.6 million subscribers at the end of February 2020 to more than 20 million present day (Yahoo, 2020). This type of growth can be attributed to algorithms which play a pivotal role in how humans communicate and carry out activities. Within our digitalized society, algorithms are immersed in our daily life as they help with retrieval of information, consuming products, connecting and learning (Rieder et al., 2018). YouTube, one of the largest global social media platforms, is owned by Google who possesses an ever-growing library of data that allows them "considerable power to shape lives and outcomes as a consequence" (Wilson, 2017, p.142). YouTube receives over two billion users visiting its platform each month with billions of views generated daily (YouTube, 2021). It aims to aggregate content published by creators in order to drive more creators and users to its platform (Burgess & Green, 2009).

Compared to present day, YouTube did not launch with all the elements and features currently implemented in its platform. Over time, renovation and refinement have occurred as YouTube has strived to amplify the behaviors and captivate those who use their platform (Allocca, 2018). The algorithm plays a massive role in YouTube's power as it is deemed 'black boxed' meaning its inner working is hidden (Bishop, 2018; Bucher, 2012; Kitchin, 2017). Although there is public information about manipulating the algorithm, researchers and creators can never know for sure how to gain visibility or why certain videos are broadly promoted as a result of its proprietary environment (Bishop, 2019). As the rise of online users and content becomes more saturated, it creates a challenge to become noticed especially on YouTube where more than 500 hours of content is being uploaded every minute (YouTube, 2021). This drives YouTube creators to become devoted to learning and attempting to gain visibility through YouTube's algorithm (Bishop, 2020). Essentially, visibility operates as a reward since invisibility is a threat for creators who desire to become noticeable.

YouTube encompasses a plethora of popular creators who are deemed celebrities as they earn income through advertisements and reaching a massive audience along with their own website (Burgess & Green, 2009). With the amount of content being uploaded to the platform, it is imperative that

creators are able to differentiate themselves to gain an audience. YouTube provides the chance for content creators to develop niche content which can eventually snowball into a popular category of channels (Allocca, 2018). There are a plethora of growing channels and creator categories across YouTube, one of the popular ones being fitness. The fitness industry has always been a prominent industry for people to maintain their wellbeing, and in 2023 it is estimated that the physical activity market will be valued at $1.1 trillion (Duplaga, 2020). With the emergence of creators, this industry has accelerated in growth as a result of the online realm. People consume fitness differently than before as they turn to workouts that can be streamed via a digital device, which has led fitness influencers to transform this sector by providing personalized workouts for audiences (Lewczyk, 2020). On YouTube, fitness creators publish content on their channels that range from a variety of workout routines to healthy lifestyle tips which is usually cross-promoted on other social platforms.

For female fitness creators, there is a level of transparency with their audience as they typically share their lifestyle and own personal challenges to connect with their audience (Forsman, 2020). Female fitness creators are present across social platforms with each establishing their own fitness niche ranging from HIIT to dance cardio. This research intends to concentrate on female fitness creators to understand their management of visibility on YouTube. Although there is research of management of visibility through algorithmic gossip for female beauty vloggers (Bishop, 2019), there is no existing research on female fitness creators that encompasses all the aspects of their job that contribute to their visibility. Based on the objective of YouTube creators along with highlighting the category of fitness, I propose the following central research question: *How do female fitness creators manage their visibility with YouTube's algorithm?*

In addition to the main research question, two additional sub questions have been devised. For creators, managing a YouTube channel along with other social platforms is a full-time job in itself. It is not as simple as just creating a video and uploading it on social media. There are a handful of skills that creators possess such as commitment, authenticity, and fulfilling the expectations of your audience with engagement and regular posting in order to be successful (Allocca, 2018). Khan (2020) argues that social media is a significant asset to the role of fitness professionals as they use each social media platform for different purposes to support their career and their followers. Additionally, the research of Duplaga (2020), Stollfuß (2020), and Sokolva and Perez (2020) provide insight into the role of fitness influencers. Based on existing research, the following sub question is proposed: *What is the role of female fitness creators?*

At the start of the COVID-19 pandemic, staying home led people to seek new ways to continue their daily fitness routines. YouTube noted that starting in March 2020, there was a 515% increase in daily views from videos with titles containing the phrase "home workout" (YouTube, 2020). This insight implies that creators began incorporating pandemic related words in their YouTube videos. By using hashtags or keywords on social networks, this leads to the emergence of communities (Dessart & Duclou, 2019). To further understand this research's community, the second sub question is proposed: W*hat are the connected communities of female fitness creators who publish videos with the keyword 'home workouts' on YouTube?*

The practical relevance of this research is for female fitness creators and general creators on YouTube to understand how to navigate the YouTube algorithm in order to grow their online presence and become noticeable while enduring the ever-growing amount of content and creators online. It could help creators be aware of struggles or challenges that come with the role, as well as learning new strategies and practices to improve visibility and become part of a community within their own category. Also, this research can benefit companies who have their own YouTube channel or presence on another social media platform as to how to manage their content and visibility against social media algorithms.

The structure of the thesis will examine existing research and literature. These works encompass theoretical frameworks that cultivate the concepts of fitness creators, algorithms and visibility. Additionally, the mixed-method approach will be justified to answer the central research question. Through this approach, the data collected from female fitness creators is analyzed through qualitative and quantitative ways. From there, the findings and analysis are presented in the results chapter. To conclude the thesis, the conclusion chapter ties it altogether.

2. Theoretical framework

This chapter's objective is to present existing research in order to establish a strong foundation to support this study. The first section presents research surrounding fitness influencers which includes the impact of COVID-19, usage of social platforms and gender and diversity. The second section focuses on managing visibility on YouTube including algorithmic gossip and black boxed algorithms. A considerable amount of existing research focuses on the role of influencers and the term is prevalently used, and most of the media and communications research I draw on uses the term 'influencer.' However, the term should be broadened to study content creators as they can also be influencers and vice versa. Based on empirical findings, the participants in this study are deemed creators as their objective is to promote fitness and a healthy lifestyle to their audience while influencers typically promote products to persuade their audience.

2.1 Fitness influencers

As technology evolves, the pervasive area of fitness has expanded online leading to the evolution of fitness influencers. The fitness industry's growth can be attributed to the growing number of people showing increased awareness of their physical health with an acceleration from online influencers (Duplaga, 2020). With an increasing number of passionate fitness individuals, they are either seeking out professionals online to guide them, or if they possess enough knowledge, they are establishing themselves as a creator online. French scholars Karina Sokolova and Charles Perez (2020) explain that fitness influencers on YouTube are defined by how they "feature their bodies, demonstrate their exercise experience and tips, propose online coaching and free workouts, amongst other things, to their followers" (p.1). For fitness professionals, some balance offline and online teachings while others have transitioned solely online. As an option, videos can perform as an alternative to a gym environment with a fitness guide, particularly if gyms are not available for people (Sokolova & Perez, 2020).

The role of fitness influencers evolves based on their growing presence and numbers of followers which Duplaga (2020) explains as a transition from solely publishing their own content on social media to developing their own business with products and brands. Additionally, Duplaga (2020) emphasizes that some fitness influencers don't leverage social media as an income source, but instead leverage their social media as a means of communication to support their other fitness activities. Based on the fitness influencer discussion, Duplaga (2020) argues that the actions of fitness influencers present a risk by trying to generate income from product promotions that actually have no health benefit. However, this argument creates a distinction between a person who is considered an influencer versus a

creator. Influencers are promoting brands or products, while creators are focused on producing content (Williamson, 2019). Overall, the study from Duplaga (2020) implies that with the increasing popularity of the fitness industry, fitness influencers have entered the scene by creating a social media presence and branding themselves for an audience.

2.1.1 Impact of COVID-19

Last year, the unprecedented COVID-19 pandemic led to a global lockdown which included closure of businesses. With this event currently lingering, I refer to research from Joseph Godefroy (2020) who highlights how the fitness space has experienced a development online and at home. Godefroy (2020) emphasizes how Instagram served as a tool for fitness content during the pandemic in France. For many fitness influencers, they leveraged the lockdown to publish a variety of fitness content tailored for at home on Instagram (Godefroy, 2020). With fitness influencers not being able to exercise in the gym, their revealed practices were part of a strategy to maintain visibility (Godefroy, 2020). Additionally, Godefroy (2020) argues that the lockdown causing businesses to close has "led to changes in the way people practice sport and social media have played an important role in this" (p.6). Throughout the pandemic, fitness influencers leveraged their social media platforms to share their knowledge and discuss the impact of COVID-19 on the fitness industry (Godefroy, 2020). Instagram offered people the opportunity to find ways at home to stay fit and healthy during the lockdown.

In addition, Kaur et al. (2020) studied the COVID-19 physical and mental effects on fitness freaks. Kaur et al. (2020) discovered that the lockdown caused a lack of motivation to exercise and psychological health issues. The lockdown led individuals to rely on social media to "know about virtual fitness techniques and opportunities for online training for physical exercise" (Kaur et. al, 2020, p.8). Fitness freaks, who are avid gym goers, felt a detrimental hit by the pandemic as a result of businesses shutting down (Kaur et al., 2020). This adjustment led to searching for new exercises to restore their physical and mental well-being (Kaur et al., 2020). Based on the research conducted, Kaur et al. (2020) concludes that as the lockdown was extended, people adopted new ways of exercising and maintaining their healthy lifestyle. The impact of COVID-19 made the online fitness space flourish as a result of business closures leading people to turn to online to improve their well-being or share their fitness with others.

2.1.2 Usage of social platforms

For fitness influencers, it is imperative to grow a presence and audience online in order to establish oneself in the digital realm. Fitness content is widespread across social media platforms with Instagram having more than 150 million posts using the hashtag '#gym' (Stollfuß, 2020). German scholar Sven Stollfuß (2020) delves into fitness content as entertainment for social media. Many fitness influencers on Instagram have acquired a fan community leading them to create fan pages (Stollfuß, 2020). This formed community establishes a relationship with the creator and their audience. Similarly, Khan (2020) discusses how fitness influencers strive to establish a large audience by sharing workouts and lifestyle tips in order to inspire them. Khan (2020) argues that fitness professionals use social media platforms to grow and maintain their online community.

Furthermore, there are four emerging themes that are prevalent among fitness influencers when it comes to how they use each social media platform (Khan, 2020). Fitness professionals use social media to build a strong relationship with their followers by publishing a variety of fitness content, educating themselves, building social connections by collaborating, and promoting and marketing one's business (Khan, 2020). Marketing is a prominent purpose for business promotion as it could lead to a sponsorship or acquiring a new client. It can also increase visibility as "having oneself on a social platform makes it easier for people to discover you" (Khan, 2020, p.6). Through Khan's (2020) research, it is reported that earning revenue falls under the objective of marketing as fitness professionals see YouTube as a core income source, so they cross-promote on Facebook and Instagram to drive their audience to YouTube. By establishing a presence on multiple social media platforms, fitness professionals approach each platform with a different objective to contribute to the overall role of their work (Khan, 2020).

2.1.3 Gender and diversity

In the creative industries, characteristics such as ethnicity or gender are analyzed across sectors to understand the issues and challenges faced within creative roles. This research centers on fitness creators within the female population to draw conclusions on the role of female fitness creators. Therefore, I address discussions regarding workplace experience in creative industries for certain groups of people. The first debate stems from Tremblay and Dehesa (2016) who investigate immigrant artists within Montreal's creative industry to understand their employment rights and job accessibility. Tremblay and Dehesa (2016) argue that immigrant creators face more challenges such as financial risks, access to stables jobs, and connecting with networks than local creators as a result of lack of accessibility and immersing oneself in the local network. When it comes to sources of income, many of

the artists have to work multiple jobs or pivot to a regular non-creative job to earn a livable income (Tremblay & Dehesa, 2016). The ability to connect within the network and gain support is difficult for the artists as some feel they are not part of the network (Tremblay & Dehesa, 2016).

A supportive contribution to the media sector is from British sociologist David Hesmondhalgh and Australian scholar Sarah Baker (2015) who explore segregation of sex within the creative industries. Their study argues that discourses and stereotypes contribute to the segregation that occurs in the industry for both women and men (Hesmondhalgh & Baker, 2015). For women, stereotypes surrounding their workplace position have been emphasized more as gender differences are prevalent within the creative industries. Based on the research conducted within the creative industries, women are deemed more supportive, caring and sympathetic and they possess strong listening and communication skills (Hesmondhalgh & Baker, 2015). To further expand on this finding, Hesmondhalgh and Baker (2015) explain that there is a notion that women are more organized which supports the female association with roles such as "production manager, production co-ordinator and production assistant…" (p.31). For men, there is more risk to step outside the rules which can lead to a different type of creativity that supports the association with roles such as "technical and 'craft' jobs such as camera operators and editing in television…" (Hesmondhalgh & Baker, 2015, p.28). From this discussion by Hesmondhalgh and Baker (2015), the stereotypes and discourse are reaffirmed by individuals of both sexes within the creative industries that elicit the "sexual work segregation" (p.24).

2.2 Managing visibility on YouTube

Throughout my fieldwork among fitness creators, I recognized that a salient topic was their visibility on YouTube. Due to this finding, I draw on the vivacious debates on visibility on digital platforms. One of the first substantial contributions was made by the Norwegian media scholar Taina Bucher (2012) who inverts Foucault's (1977) Panopticon framework to understand the power of algorithms and visibility. While Foucault's theory is not tied directly to media, the work "helps illuminate the ways in which the media participate in configuring the visible as oscillating between what can and should be seen and what should not and cannot be seen, between who can and cannot see whom" (Bucher, 2012, p.1165). The concept of the Panopticon represents the idea of an annular structure with a tower in the middle where the cells are visible from the tower (Foucault, 1977). The understanding is that one is not aware if they are being observed at any particular time alluding to constant visibility. Unlike the structure of the Panopticon, which provides permanent visibility and surveillance to all from the tower, algorithms do not automatically execute visibility to all (Bucher, 2012).

Rather than concentrating on being observed, Bucher (2012) examines Facebook's algorithm based on invisibility, or the chance of vanishing or not being deemed sufficiently worthy. Through her research on the threat of invisibility, Bucher (2012) learned that Facebook's News Feed algorithm functions around the notion of "visibility functions as a reward, rather than a punishment, as is the case with Foucault's notion of panopticism" (p. 1174). On Facebook, content which prevails to the top of the feed due to the algorithm is bolstered by engagement, while rather lack of engagement results in lack of visibility (Bucher, 2012). With the number of users, creators and content on the Internet, Bucher (2012) explains that the Internet is not about surveillance, but essentially vanishing from the Internet. This argument can be applied to YouTube as the goal for creators is to increase visibility which comes from their understanding of YouTube's algorithmic and the ways they implement learned tactics.

Bucher's (2012) findings have led to a discussion from Cotter (2019) focusing on influencers' knowledge of 'playing the visibility game' and Instagram's algorithm serving as the game. This significant research regarding the power of algorithms and visibility, stems from American scholar Kelly Cotter (2019) who emphasizes that influencers fear becoming irrelevant and harming the algorithm by carrying out an action. Influencers learn how to play the game through research that involves reading "the blogs of third-party companies and marketing gurus, learning from each other through discussion, and gathering and assessing empirical evidence" (Cotter, 2019, p.902). By utilizing a variety of sources to learn about the algorithm and visibility, influencers can learn about strategy topics such as hashtags to use, best time to post, and growing engagement (Cotter, 2019).

Through her research of influencers and online discussions, Cotter (2019) found that influencers are able to not only discover factors that help visibility, but bias factors such as bans and lack of activity. Influencers are unsatisfied to only know that Instagram operates with an algorithm, rather they feel the need to understand its inner workings in order to prevail in the game (Cotter, 2019). The fieldwork conducted for this research was guided by the debates from Bucher (2012) and Cotter (2019) as influencer strive to worship the algorithm in order to achieve influence and gain visibility as there is a risk of becoming invisible online. In my fieldwork, these findings helped to understand the research community as the shared experiences and understands that aligned with the work of these scholars.

2.2.1 Algorithmic gossip

As social media encounters an increasing number of creators and published content, it can be difficult for anyone and anything to be noticed. Creators have learned theories and implemented strategies to manage their visibility through concepts like algorithmic gossip. As a prominent researcher

of media and algorithmic transparency, Sophie Bishop (2019) builds on Cotter's (2019) work of the invisibility game by conducting an ethnography on YouTube to study theories and practices applied by beauty vloggers in order to navigate the algorithm and maintain visibility. Bishop (2019) argues that algorithmic gossip can serve as a valuable tool for "revealing information about how algorithms work and have worked, in addition to revealing how perceptions of algorithms inform content production" (p.2589). Algorithmic gossip is defined as knowledge that is discovered and combined through observations and discussions of individuals' experiences with the algorithm (Bishop, 2019). By analyzing this definition, algorithmic gossip can be deemed a type of data that works to uncover how YouTube's algorithm operates.

YouTube's algorithm plays a major role in offering or limiting visibility (Bishop, 2019). An implication is that YouTube's algorithm controls the level of visibility for creators. The range of visibility can affect opportunities and income for creators (Bishop, 2019). If a creator is struggling with growing their channel, then the income will be trivial which requires them to have multiple sources of income. Through Bishop's (2019) contribution to this field, theories and strategies are revealed by vloggers that strive to diminish risk and create content that aligns with YouTube. It is highlighted that vloggers use private groups and chats for support and speculation of theories about the algorithm, however sometimes it can occur on public platforms such as Twitter (Bishop, 2019). This type of gossip from vloggers includes strategies such as using mailing lists or seeking information from fans, but also exposing any discrimination encountered in relation to the YouTube and its algorithm (Bishop, 2019).

As a way to delve deeper into YouTube's algorithm, Bishop (2020) leverages her previous research on beauty vloggers to explore 'experts' who strive to share theories or learnings to creators about algorithmic visibility on YouTube. Creators are dedicated to obtaining visibility on YouTube through the algorithm and do so by looking to experts on how to become recognizable (Bishop, 2020). With social media growing, "YouTube is becoming more saturated with hopeful content creators looking to make an income on the platform, and visibility and payment are increasingly scarce and coveted" (Bishop, 2020, p.9). These experts target all creators by disclosing research, theories and strategies to help "mitigate the risk of algorithmic invisibility" (Bishop, 2020, p.1). They position themselves as having access to concealed information regarding YouTube's algorithm as it is deemed a 'black box' (Bishop, 2020). These experts establish the notion that anyone can optimize their YouTube content through a set schedule and recommended lengths and themes in order to achieve success (Bishop, 2020). However, Bishop (2020) concludes that the experts' advice cannot be generalized as they neglect to recognize bias barriers on YouTube for creators.

2.2.2 The challenge of algorithms

Many scholars study algorithms as black boxes, but some scholars reject this idea. As previously discussed, Bucher (2012) contributes to the research on the threat of invisibility online and mentions that algorithms are deemed as a black box in relation to the threat. Furthermore, Irish media scholar Rob Kitchin (2017) and media scholar Sophie Bishop (2018) accept the black box concept of algorithms by investigating the challenges presented and how to navigate it. Kitchin (2017) expands on algorithmic research to understand the of the challenges they present and ways to overcome them. There is ambiguity when it comes to understanding how algorithms exert their power and decisions with garnered data as they are black boxed (Kitchin, 2017). Three challenges encountered when confronting algorithms are black boxed, diversified and embedded, and constantly developing. In regard to the black box, some algorithms such as YouTube hides access to the coding and overall structure which provides companies with a competitive advantage (Kitchin, 2017). By keeping their algorithm as a secret, it helps "limit the ability of users to game the algorithm to unfairly gain a competitive edge" (Kitchin, 2017, p. 20). Each algorithm is uniquely constructed and implanted differently so it is often challenging to decode the ingredients that contribute to the overall algorithm (Kitchin, 2017). With algorithms constantly changing and evolving, there is a chance that Google is implementing many different types across their sites so that it learns to improve itself (Kitchin, 2017).

Through research, Kitchin (2017) argues that there is a lack of attention given to reflecting critically and studying algorithms from a non-technical perspective. There tends to be more research and literature surrounding the technical aspect of algorithms. In addition to the challenges faced, there are six approaches presented to help understanding how algorithms work and overcoming any problems encountered (Kitchin, 2017). One approach that Kitchin (2017) addresses is reverse engineering to help when an algorithm's code is black boxed. Reverse engineering involves "examining what data are fed into the algorithm and what output is produced it is possible to start to reverse engineer how the recipe of the algorithm is composed...and what it does" (Kitchin, 2017, p.24). Another approach is researching how algorithms operate in the world by conducting ethnographies of how people manage and feed algorithms (Kitchin, 2017). In my fieldwork, this insight helped to understand the research community in regard to their understanding and strategies towards the algorithm.

In conjunction, Bishop (2018) builds on the work of Kitchin (2017) by discussing the method of reverse engineering YouTube's algorithm as a result of it being black boxed. Bishop (2018) examines beauty vloggers on YouTube and how the algorithm operates as it rewards some while it is biased towards others. By drawing on the argument from Bishop (2018), the issues with this method are

countered due to clear distinction between "what algorithms are doing and what content creators think an algorithm is doing…" (p.73). With increased income from a growing number of advertisers and brands on YouTube, its algorithm design controls the output and visibility to align with YouTube's commercial goals (Bishop, 2018). This leads to punishment for creators and "noncommercially viable genres" (Bishop, 2018, p.71) as a result of the algorithm's functionality and output. Reverse engineering is applied as a framework to examine what is being fed into the algorithm to study the results.

There are three algorithmic indicators examined: viewing sessions, keywords and tagging, and closed captioning (Bishop, 2018). For keywords and tags, they remain hidden on YouTube's interface, but they are able to be found by opening the coding source of a page. Tags play a role in genre development that they are "influenced by and influence gender norms on the platform and within society" (Bishop, 2018, p.77). This means the algorithm becomes familiar with the tags used by each creator to establish recommendations and search results on YouTube within a certain topic. Based on the work from Bishop (2018), this helped to guide the quantitative method conducted for this research by extracting the tags used by female fitness creators on YouTube to examine the communities. As vloggers discover new practices to optimize the algorithm recognition, platforms recognize this by supporting optimization only for some users, not all (Bishop, 2018). In order to be punished by YouTube and the algorithm, it requires vloggers to counter the genre that their channel and content are recognized by or if their viewership drops in one video (Bishop, 2018). The algorithm rewards creators that leverage metrics in line with their channel's genre, but it also rewards creators who benefit YouTube and the advertisers (Bishop, 2018). YouTube's algorithm does not provide equality to every creator across the platform as it rewards genres that are aligned with its own advertisers and brands due to YouTube's political economy.

When it comes to black boxes, there are concerns and issues raised about its functionality. I briefly draw on black box commentary from South African scholar Paul Prinsloo. Prinsloo (2020) argues that it is imperative to investigate education institutions' black boxes internally to gain insight as they determine students' trajectories and students should be able to access information about them. It is thought that moral code, transparency and accountability can help improve the issues of black boxes, however when it comes to data there tends to be an "inherently *political* nature" (Prinsloo, 2020, p.5). Additionally, Australian sociologist Gavin J.D. Smith (2020) highlights the growing algorithmic control and identifies cities as black boxes due to the city surveillance being outsourced to algorithms. It is argued that the implementation of algorithmic control is not to alleviate issues of bias or injustice, but rather to "manage the symptoms these structures produce" by employing methods that are deemed

more effective and efficient (Smith, 2020, p.8). Both Prinsloo (2020) and Smith (2020) helped to support the fieldwork on the community within this research as algorithms, and its black box demeanor are inaccessible for creators who data is being collected by YouTube as it implies that there is a political layer as creators are carry out or avoid certain practices to abide by the algorithm.

While the previous scholars emphasized reverse engineering and the challenges of the black box algorithms, Trammell and Cullen (2021) reject the idea of the black box and argue that algorithms and its impact can be understood through other methods. The scholars focus on discourse of algorithmic bias in a game called *Overwatch* where users strive to establish a "hierarchy of knowledge within their community" which is applicable to the way algorithms function in our culture such as "being able to optimize search engine results, YouTube hits, or even one's credit score…" (Trammell & Cullen, 2021, p.163). This hierarchy of information is applicable to many other social infrastructures in our society implying that way individuals think about and strive to govern algorithms plays a larger role in its power than decoding the algorithmic code. As algorithms become more integrated into everyday society, there is increased attention on deciphering the black box which is declined by some scholars as they raise awareness of other ways to perceive algorithms fixated with our culture and society. This chapter presents existing field research to support my research on female fitness creators from YouTube. However, it is evident there is a void of research surrounding female fitness creators on YouTube which this research seeks to provide by filling the abyss.

3. Methodology

For this research, a mixed-methods approach was applied by incorporating qualitative and quantitative methods to answer the research questions. Throughout this chapter, the combined methods answer the central research question: *How do female fitness creators manage their visibility with YouTube's algorithm?* The qualitative methods of in-depth interviews and participant observation answer the proposed sub-question: *What is the role of female fitness creators?* Additionally, the quantitative method of a social network analysis answers the second sub-question: W*hat are the connected communities of female fitness creators who publish videos with the keyword 'home workouts' on YouTube?* The first part of this chapter will delve into the qualitative methods of in-depth interviews and participant observation, and the last part will elaborate on the quantitative method of a social network analysis.

3.1 Mixed-methods approach

This study involved applying a mixed-method research design, which consists of conducting a qualitative and quantitative method(s). This convergent parallel design strives for a balance between qualitative and quantitative to ensure that the mixed-method research, data collection and analyzation are conducted at the same time, but kept independent (Guest & Fleming, 2015). The motive behind using a mixed-method design was that "combining more than one type of data source provides a fuller understanding of a research problem than a single or mono-method approach" (Guest & Fleming, 2015, p.582). A qualitative approach alone can provide substantial information, yet it is not sufficient to provide an in-depth understanding and answer for my research questions. The use of a mixed-method approach is ideal when it can enhance a study with an additional method, or extrapolate research findings (Guest & Fleming, 2015).

For this specific study, the mixed-method is primarily based on qualitative methods and enhanced through a quantitative technique. The qualitative component included in-depth interviews and a digital ethnography which includes a participant observation and comment thread analysis. The quantitative component consisted of a social network analysis accompanied with a visualization. A graph or image visualization aids to cultivate awareness of main factors related to the area being studied (Born & Haworth, 2016). There are different ways to approach a mixed-method design, however the most suitable for this study is a convergent parallel design. This convergent parallel design keeps the methods separate and once the analysis is complete, the results are combined for the researcher's overall evaluation and interpretation of the data (Guest & Fleming, 2015). The independence of data collection

allows for the data to not rely on each other. After the collection, the integration is merged with a

concurrent design. For my research, the applied concurrent design form is triangulation which refers to

the incorporation of a variety of methods, sources or outlooks to support my findings (Guest & Fleming,

2015). The validity increases and risks are reduced regarding inaccurate interpretation by merging data

from multiple sources (Guest & Fleming, 2015).

The ethical issues surrounding the use of a mixed-method are the need to contact participants

later on after the initial results as well as this method creating a large burden on participants but also

providing a greater benefit (Dowding, 2013). Since I had a vast amount of data, I did not need to contact

any of the participants, and I sent a follow-up email to some after the interviews. The objective was to

make sure the participants "understand the full nature of their participation at the time of initial

consent" (Dowding, 2013, p.28). In order to avoid any burden on participants due to personal issues or

limited time, the data collection needed from participants was from the in-depth interviews. The rest of

the data collection from the mixed-method approach stemmed from my own research.

3.2 Qualitative data collection

This research focused on collecting data from female fitness creators on YouTube through in-

depth interviews and a digital ethnography. The population for my research were female fitness creators

on YouTube. The unit of analysis was people with no specific age range. To narrow the population, the

creators must possess a minimum of 10,000 subscribers with an active channel including consistent

video publishing and a variety of fitness content for audiences to do. Consistent video publishing means

that the creators are posting a video at least once per week or bi-weekly. Additionally, the content

revolves around teaching or showing others exercises or workouts, rather than a video documenting

their eating and lifestyle routine. To caveat, some participants published more content relating to health

and fitness routine since it was a challenge to connect with creators who only published workout

content. The creators are a combination of professionally certified and self-taught fitness passionate

individuals. For the sample size, the in-depth interviews consisted of 11 female individuals all of whom

were identified as fitness creators along with one female YouTube user.

For the in-depth interviews, the data collection involved a total of 12 in-depth interviews to

support my research questions. In order to recruit participants for in-depth interviews, I began looking

at YouTube channels to find participants. I browsed recommendations and homepage plus subscribed

channels of creators to find potential participants. I used my own YouTube account to research, so as I

continued to search for creators, my homepage and recommendations began to optimize within the

fitness realm. This helped to dig further down the funnel as the algorithm began to recognize my searches which eventually led to discovery of more micro creators, or creators that you wouldn't typically find through one search.

My sampling strategy consisted of a non-probability method mixed with snowball sampling and purposive sampling. I started with purposive sampling by selecting participants that I deemed suitable for my research (Sarstedt et al., 2018). The selection of participants is based on "preselected criteria relevant to a particular research question" (Mack et al., 2005). I outlined criteria of my population and applied it to select my sample participants on YouTube. Once I was able to obtain interviews, I began to apply snowball sampling during the in-depth interview by asking for recommendations of other creators who may be able to participate or the participant innately provided names of creators. This method is helpful when trying to reach a group that is not easily accessible to myself as the researcher (Mack et al., 2005). With qualitative interviews, it is important to keep anonymity when discussing participants (Allen & Wiles, 2016). This is an important research practice as I use a pseudonym for each of the interview participants. For any creators that were part of the participant observation, I use their real names throughout this research.

Furthermore, I reached out to fitness creators via email and I asked if they would be willing to share their experience as a fitness creator on social media. I began sending emails at the end of February as the first creator I reached out to was Sophie van Oostenbrugge who possesses more than 300K subscribers. I didn't receive a response from her, though I received my first response from a female fitness creator who politely declined my request. The first person to respond with an agreement was a male fitness creator, however after he asked to communicate further via WhatsApp, I never received a reply after attempting to follow-up. The first person I conducted an interview with was a female fitness creator named Kennedy from the United Kingdom. I wasn't able to find her email on YouTube, so I found her Instagram account and sent her a direct message to set up an interview. There was no access needed in order to connect with creators as I was able to find their email on their YouTube channel. When starting the recruitment process, I was not assured that I would be able to interview 12 creators due to their popularity and hectic schedule. I planned to interview a couple of YouTuber users to gain a different perspective, however I ended up exceeding my expectations and was able to connect with 11 creators. To completed 12 interviews, I selected one female user from the United States through purposive sample who is an avid social media user.

My recruitment strategy involved creating a spreadsheet to track all the stakeholders that I reached out to via email. In total, I reached out to 136 fitness creators from YouTube via email. Among

those 136 emails, I received 19 total responses: 5 declined, 11 accepted, 3 accepted but never responded after following up. Originally, I intended to have a diverse data set with both female and male fitness creators, however I didn't receive any responses from male fitness creators that were willing to participate. I recognized this throughout the recruitment and interview process, which led my research to become a study on the female community of fitness creators on YouTube. Given that the participants are located around the world, each interview could be conducted only over a video call. The people who responded with a willingness to participate were provided with a consent form (see Appendix A) and details for our interview. Some participants opted to provide written consent while most opted for oral consent meaning they received all the information needed to participate and then orally consented at the beginning of the interview. The interviews were conducted between March 5th and April 13th of 2021. The interviews ranged from 32 minutes to one hour. Prior to the interviews, I recorded a couple notes about each participant such as their social platform presence, top performing YouTube video and number of subscribers. This pre-research helped to provide support when asking questions to the participants. During each interview, I recorded the call and transcribed the recordings in word documents to be used for coding and analysis. These garnered elements collectively make up the interview data.

For the digital ethnography, I conducted a 28-day online participant observation that consisted of following five YouTube fitness creators online to analyze their digital behavior. When I started recruiting participants for the in-depth interviews, I also chose fitness creators on YouTube to observe for my participant observation. I choose five creators that included three females and two males. Although I eradicated males from the in-depth interviews due to the lack of response, I continued with both genders for the participant observation as I completed much of it before I acknowledged that this is female-focused. When conducting an online ethnography, a significant amount of data is garnered throughout the research, so it is imperative to create a structured system for documenting and organizing (Alleyne, 2018). The data was collected through fieldnotes on OneNote for each day of the observation. Fieldnotes require going to the websites or platforms and recording relevant information for the research topic (Wolfinger, 2002). A comprehensive note-taking strategy was applied which involves describing all that occurred during the time of observation (Wolfinger, 2002). The daily fieldnotes encompassed elements such as the people involved, actions of the people, activities that people are doing, objective of people and the places of occurrence (Spradley, 1980, as cited in Wolfinger, 2002). Additionally, I separately took occasional notes reflecting on the process and objective which serve as a tool for the researcher's own experience (Alleyne, 2018). Prior to starting the

participant observation, I created protocols to guide my month-long observation. To add to the digital ethnography data, I also collected five comment threads from different YouTube videos by female fitness creator, Bailey Brown. Each video consisted of comments ranging from 35 to 64 total (see Appendix B).

3.3 In-depth interviews

The qualitative technique of in-depth interviews was conducted to answer the first proposed sub-question. In-depth interviews are a suitable method for my research as this type of interview aims to seek further understanding and information from participants within the fitness community son YouTube. It is beneficial in order to go beyond surface level explanations, discover preconceived assumptions, and it grants the researcher the ability to comprehend and decipher varying perspectives (Gubrium & Holstein, 2001). As the interviewer, my objective was to "achieve the same deep level of knowledge and understanding" (Gubrium & Holstein, 2001, p.5) as the participants whom I interviewed. To reach this objective, it is helpful to gain insight into people's perceptive and demeanor (Boyce & Neal, 2006) such as the tactics or practices that the participants implement in order to grow their channel and increase their visibility on YouTube.

Prior to the interviews, I created an interview guide (see Appendix C) that I used as a trajectory to support my research. It is typical that in-depth interviews are conducted face-to-face, however due to the COVID-19 pandemic and participants being located across the world, the video call took place on Zoom. Prior to the interview, communication only took place over email, which made scheduling complex due to the participants' time zones. I offered my flexibility to accommodate scheduling as I dedicated my time solely to this research. Although the interviews were not in-person, the ability to still leverage synchronous communication, of real-time calls is an important element. Synchronous communication provides advantages such as observing social cues, no time delay and allows for spontaneous responses (Opdenakker, 2006). It is imperative to be aware that technology is susceptible to technology issues or failure (Kazmer & Xie, 2008). Throughout the interview process, I had no issues with the platform recording, however my Wi-Fi connection was poor during some interviews which caused the calls to freeze at times. If that occurred, the participant encountered it on their end as well which led them to repeat their response.

All 11 creator participants of this study possess a total of subscribers ranging from 14K to 293K (see Appendix D). Each participant divulged their own experience leading some in-depth interviews to follow closely to the interview guide questions while others digressed. I prepared to follow the flow of

the conversation and be open as the interviewer, although it is imperative to be assertive enough to be able to return to the interview course without causing an abrupt shift that would cost losing potentially valuable information (Gubrium & Holstein, 2001). The first set of questions are considered ice breakers to understand how the participants' fitness journey developed. The second set focus on social media platforms regarding their participation on different platforms and how they use each one differently. The third set delve into algorithm and visibility based on their experience developing their channel and online presence. In addition, questions about tactics, practices and strategies were asked to understand how they learned to navigate YouTube and grow their channel. Then, questions about the fitness community were included to find out if and how participants connect with other fitness creators. The concluding questions involved future questions regarding their growth and advice as a creator

During the course of the research project, my skills transformed as I conducted more interviews and became more comfortable and confident with the research topic and asking questions. Mack et al. (2005) emphasizes that key skills for in-depth interviews include rapport-building, highlighting the participant's view, and adjusting to different personalities. Since I was meeting participants for the first time, I tried to avoid silence or awkwardness by talking more which I improved on over time. Some participants were more open and fluid in terms of conversation, while others were more reserved requiring more time for them to become comfortable. I adapted my interview style for each participant by adjusting my "style to suit each individual participant" (Mack et al., 2005, p.39). The interviews were semi-structured as I prepared an interview guide with questions that allow for flexibility to follow the flow of the conversation in order to gain as much relevant information as possible.

3.4 Participant observation

A participant observation was carried out as part of the digital ethnography (Ritter, 2021). This qualitative method aims to support research to understand and learn about the population of female fitness creators on YouTube. The benefit of a participant observation is that it provides insight and reveals information that is previously unknown to the researcher (Mack et al., 2005). On the other hand, it is time-consuming and "requires conscious effort at objectivity because method is inherently subjective" (Mack et al., 2005. p.15). The data collected for the participant observation included detailed fieldnotes that were recorded for 28 days and five comment threads from YouTube videos. This method did not require any communication with the study population, instead it took place online. The online observations involved following five fitness creators across their social platforms and websites to record their behavior, actions, content, and branding (see Appendix E). Since I started off including male

creators in my observation, I still utilized any data from them that was relevant to the research.

Fieldnotes are imperative to the participant observation and supporting the research topic. The way fieldnotes are developed play a significant role in the knowledge or background of my role as the researcher (Wolfinger, 2002). I created a list of 20 protocols that were used as a guide when taking daily notes. At times, I didn't have anything to record for some of the protocols based on the activity of the creator. As part of the digital ethnography, there is space to further understand "how people use digital technologies and content in the contexts of everyday places, practices, relationships and routine" (Pink et al., 2016, p.70). I documented tactics or strategies implemented by the fitness creators as a routine of their daily online practice. As the researcher and an avid social media user with experience working in media, there is extensive knowledge and understanding of the creator's cross-platform presence and how they behave online. My background plays a role in the development of the fieldnotes based on how I perceive certain elements. However, I strived to keep my note-taking objective as possible based on what I merely observed. My role as the researcher can be deemed the observer-as-participant (Nørskov & Rask, 2011). This role was implemented as the observer occurs through social interaction with participants such as in-depth interviews. The researcher is merely observing rather than "pretending to be an actual group member" (Nørskov & Rask, 2011, p.7). With the participant observation, the method did not involve interaction with participants as I merely observed the online setting, however as part of the overall digital ethnography, I did conduct interviews which required interacting with participants.

3.5 Analysis of qualitative data

The qualitative data collection consisted of in-depth interviews, participant observations and comment threads. All the interviews were transcribed manually and put into a document. The comment threads and participant observation fieldnotes were put into documents as well. All the textual data was combined and imported into the coding software, Atlas.ti. The most suitable data analysis method for this qualitative research is grounded theory, which starts with open coding. Grounded theory centers around the concept of constant comparison as new data is collected for analysis, there is the opportunity for new codes to develop as well as revision of existing categories (Boeije, 2009). A distinct feature of this method is the process of steps for coding data at varying levels (Jensen, 2002).

First, open coding was performed which involves "breaking down, examining, comparing, conceptualizing and categorizing data" (Strauss & Corbin, 2007, p.61). This process helped to establish a foundation for organizing all the text material and segmenting the data based on shared commonality. Next, axial coding was conducted where connections were made between the codes to organize and

group for the creation of categories (Boeije, 2009). Once the categories were created, the last step was selective coding. Selecting coding determines which codes and categories are the most imperative and draws connections among them to answer the research question (Boeije, 2009). This coding analysis is an iterative and inductive process that is useful with managing vast amounts of data. It is a suitable method to explore and interpret the data collected through the conducted qualitative techniques. The results of the coding process are displayed in a coding tree (see Appendix F). As part of grounded theory, a thematic analysis was conducted which generated the following main themes: role of female fitness creators, online fitness community, navigating the algorithm, and the overall core category of managing visibility.

With qualitative research, it is imperative to address two significant concepts: reliability and validity. Reliability involves being transparent with the research process by providing complete details of the strategy and analysis as well as the theoretical viewpoint (Moisander & Valtonen, 2006). To acknowledge this study's transparency, I've previously described in-depth details of the research process. Additionally, reliability plays a valuable role when writing fieldnotes and transcribing interviews. After conducting interviews, I manually produced transcripts to ensure that the "reliability of interpretation" (Silverman, 2011, p.366) is exact by including any pauses, reactions or overlaps. When it comes to observations and an ethnography, access to fieldnotes for readers is hardly available which does not help reliability (Silverman, 2011). To be transparent and provide the reader with the opportunity to formulate their own perspective on the study, an example of a fieldnotes is available (see Appendix G).

Lastly, validity in qualitative research is significant as it represents the accuracy of this study. To enhance validity of a study's results, triangulation can be applied which incorporates multiple types of data, methods, materials and compares them (Silverman, 2011). In this study, I've applied a mixed-method approach which combines qualitative and quantitative methods leading to a collection of a variety of data. The validity of a study can be achieved if the different methods carried out lead to the same conclusions (Moisander & Valtonen, 2006). The three methods collected a vast amount of data which provides significant value to support the findings leading to increased validity for this study. Though triangulation contributes to validity, it is not necessarily alone going to lead to the comprehensive truth (Moisander & Valtonen, 2006). The research's objectivity is important in conjunction with validity. The interviews were conducted in an objective manner by ensuring comfortability in language used during the interview and the innate desire for participants to take part in the study.

3.6 Computational network analysis

To support the digital ethnography, the quantitative method carried out was a social network analysis to answer the following sub-question: *What are the connected communities of female fitness creators who publish videos with the keyword 'home workouts' on YouTube?* As technology and social platforms grow, the development of online communities has begun to form and expand. Kozinets (2010) explains that online communities are becoming more integrated into daily lives and cover a variety of human interests from community groups to professional groups. Participants discussed their integration and experience with the online fitness community as a result of their YouTube channel and other social platforms. To further understand the interconnectedness of this study's population, a social network analysis was carried out. A social network analysis (SNA) analyzes social networks and views "social relationships in terms of network theory, consisting of nodes (representing individual actors within the network) and ties (which represent relationships between the individuals such as friendship, kinship, organizational position, sexual relationship, etc.)" (Akhtar et al., 2014, p.388). SNA aims to analyze relationships between individuals within a network, however more recently this technique is being applied to analyze social networks such as Facebook or YouTube (Akhtar et al., 2014). For this study, a digital ethnography was enhanced by the addition of a computational technique. With digital methods such as a SNA, it allows for the use of "web data to study social phenomena…" (Rogers, 2015, p.3). The importance of carrying out a mixed-method approach with a SNA and digital ethnography is suitable for this research as the analysis aims to provide insight into connected communities, hubs, bridges and gatekeepers within the networks of female fitness creators on YouTube.

3.6.1 Data collection

The selected tool to carry out data collection for the SNA was NodeXL Pro. In order to create a data set for female fitness creators, I searched and compiled a list of keywords, or tags, found in the coding source from the interview participants' YouTube videos. After compiling the list, I noted which keywords appeared most frequent among all participants. The top keywords were 'home workout', 'ab workouts, 'full body workout.' Next, the data set was inputted into NodeXL Pro where the social network data, such as GDF and GEXF files, were extracted from the YouTube API. Additionally, another data set was extracted from the YouTube API for the interview participant, Kelly, to analyze her network and community. With digital methods such as a SNA, it allows for the use of "web data to study social phenomena…" (Rogers, 2015, p.3). The data collection for the SNA came from the YouTube API as it is a direct source to YouTube and can scrape relevancy to the research. The search queries used to assemble

the data for the top keywords among female fitness creators' videos on YouTube were abs workout, full body workout, and home workout. Additionally, the search query used for Kelly's network was the name of her YouTube channel. As shown in Appendix H, the NodeXL Pro search interface is displayed where the search queries can generate data sets from YouTube.

3.6.2 Data visualization and analysis

As a supplement to the SNA, a visualization such as a graph or image is produced. Visualizations are practical "to leverage the perceptual abilities of humans to find features in network structure and data" (Bastian et al., 2009). Gephi, an open-source network visualization tool, is commonly used for SNA as it encompasses a variety of features and offers a plethora of capabilities (Bastian et al., 2009). The Gephi version 0.9.2 was used to produce the visualizations of the networks. There are a variety of visualization layouts that can be generated to display network spatialization. For this method, network visualizations are based on the layout graphs, ForceAtlas2 and Yifan Hu (Jacomy et al., 2014). ForceAtlas2 is force-directed meaning that it works with the nodes and edges to create a visual that to "help the interpretation of the data" (Jacomy et al., 2014, p.2).

The network visualizations produced in Gephi show the connected communities based on the data from the keyword. The nodes represent the YouTube user network including creators that are associated with the keyword and the edges represent a video comment or reply to a comment. With the nodes and edge generating movement against each other, the layout generated helps to find a balance of the network (Jacomy et al., 2014). To analyze the visuals, I first observed the number of communities as a whole and the ForceAtlas2 layout generated from the keyword. The visualizations created from the large data sets help with the interpretation of patterns and trends to reveal insights (Coopmans, 2014). This analysis showed the giant component and sub-networks in which further connected communities were nested. I observed the overall network and strived to pinpoint creators that I recognized.

Then, I shifted the analysis by observing specific clusters from the visual to further analyze the female fitness creators that I recognized. The first creator I recognized was MadFit, who was mentioned a couple times throughout the in-depth interviews, so I focused on her connected communities with other female fitness creators. MadFit, whose real name is Maddie Lymbuner, is one of the most popular female fitness creators on YouTube and has amassed more than five million subscribers since her channel launch in 2015 (Mitchell, 2020). Finally, the last visual analysis produced for the SNA is focused on the participant, Kelly's network, who possesses more than 270K subscribers. This visualization is shaped in a Yifan Hu layout that portrays the network of users connected to her through comments.

With the incorporation of a SNA and visualizations to the other methods, it aims to elevate the robust findings on the community of fitness creators from YouTube.

4. Results

This chapter delves into the findings revealed from the research methods conducted. As previously mentioned, this study takes a mixed-method approach which involves keeping the analysis of the qualitative and quantitative data separate from each other. After the respective results are discussed, they can be combined for interpretation of the study's overall findings. The first section for the quantitative analysis centers on the connections of the fitness creator community on YouTube. The data for this section derives from the social network analysis. The second section on qualitative analysis combines the data from in-depth interviews and participant observation including comment threads. By combining the data, the findings from the analysis fall under the following: the role of female fitness creators, navigating the algorithm, and experience in the online fitness creator community.

4.1 Quantitative analysis results

As part of the mixed-method approach, the quantitative analysis is a SNA which aims to set the foundation for understanding the female fitness communities on YouTube. From the YouTube API, data was extracted that consisted of three keywords or tags that were most frequently used among the interviewed participants in their fitness videos. Based on the highest frequency from eight participants, the keyword that was chosen for the SNA was 'home workout' due to the prominence of this theme as a result of the COVID-19 pandemic. Although I ended up using only 'home workouts' as the keyword, it is important to analyze different data sets and visualizations to see what is most fitting for the research. Through the software program, Gephi, I was able to produce and analyze visuals to understand the connected communities of female fitness creators. This method will answer the following research sub-question: *What are the connected communities of female fitness creators who publish videos with the keyword 'home workouts' on YouTub*e?

4.1.1 YouTube fitness creator community

In order to answer the first sub-question, the keyword 'home workouts' data set for the SNA was extracted from the YouTube API on May 7, 2021 and imported to Gephi where the connected communities were analyzed. The modularity report shows that there are 57 communities within this data set. Modularity helps to identify communities within the data set which led to selecting the nodes rank of modularity class to group the nodes. The first visualization produced in the ForceAtlas2 layout from Gephi is shown in image 1. This social network displays the associated communities of creators using the applied keyword in their video and their connection through comments. Each cluster

represents one connected community, and the minimum degree range for this analysis is five which represents the degree of connections between creators. Additionally, it is a directed network and there are 441 nodes and 888 edges represented. The nodes represent the YouTube users including creators and the edges represent a video comment or reply to a comment. Closeness centrality was applied for the node size which ranks each node based on their proximity to other nodes in the network and places them based on their importance to the network (Disney, 2020). The bridge that connects creators to each other are deemed sub networks as part of the bigger networks. To measure 'popularity' of a YouTube creator or channel, the number of comments per video is analyzed. For the nodes, as previously mentioned, the ranking applied was modularity class which can be explained by the color of the nodes shown in image 2. The different colors represent the nodes of different connected communities. The communities with the same color show that the creators in the center are connected through the users and comments.
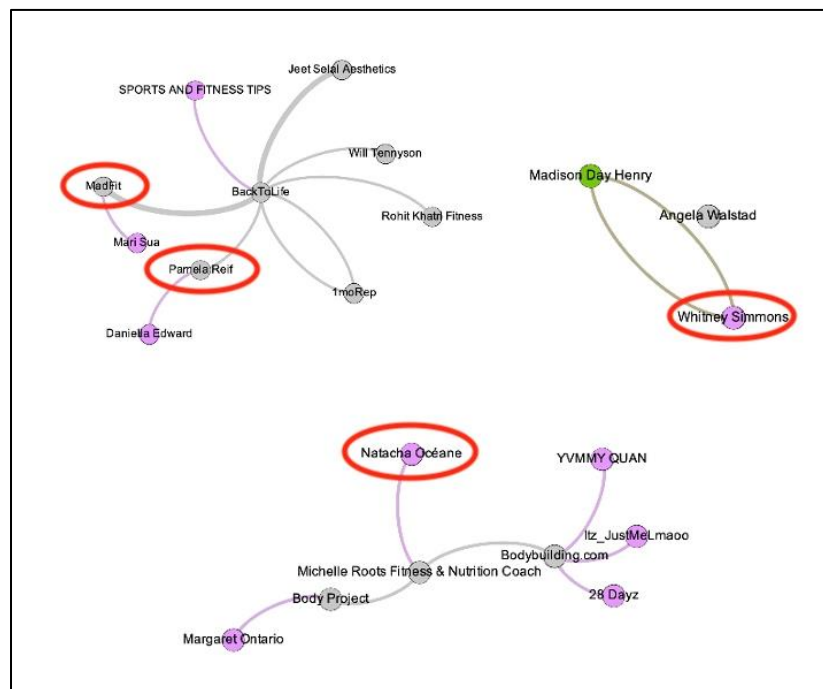
Image 1: *Visualization of 'home workouts' keyword (Source: Gephi)*

In image 1, there were no participants from this research present in the data set, however I discovered multiple popular female fitness creators who were placed in the center of respective clusters that connected to other clusters of these creators. I've circled in red the creators that I recognized within the female fitness community. One creator in particular was mentioned by a couple of the

research participants named MadFit, whose community is highlighted with a red circle in image 1. Along with MadFit, other recognized female fitness creators that are connected through an edge were Pamela Reif, Whitney Simmons, and Natacha Océane. It is apparent that there are several clusters of user networks that are connected, and there are individual users who connect one cluster to another cluster based on their network. These individual users, or YouTubers are known as bridges that link sub-networks. For example, MadFit and Pamela Reif are both grey nodes and are connected by a user called B G. Natacha Océane is linked to Whitney Simmons through one user, Cecilia Torres and both creators appear as purple nodes. It is interesting to note that MadFit and Pamela Reif have similar fitness-focused niches regarding their channels while Natacha Océane and Whitney Simmons share broader fitness niches with incorporation of lifestyle, fashion and heath. The visualizations show that the whole community of female fitness creators is not necessarily shaped by these but there are some top female fitness creators who contribute to home workouts.

Overall, this SNA demonstrates how popular female fitness creators are connected based on a data set that was assembled by the keyword 'homeworkouts.' Within this network, there are also male creators and couple creators which tend to be grouped closer together just like the female creators. This implies that the users who comment and connect with each other tend to engage with similar fitness creators on YouTube who use the keyword 'home workouts.' This keyword became more prominent due to the COVID-19 pandemic which led female fitness creators to include it in their video data. The popular female fitness creators in this visualization all possess over 1.3 million subscribers on YouTube and more than 100 published videos on their channel. The visualization reveals that for smaller female fitness creators it is helping to associate oneself within the female fitness community of massive creators by videos appearing alongside as recommended or suggested. On the other hand, if they use the same keywords in their videos then they are putting themselves up against massive popular female fitness creators in the community. This is evident from the SNA as the popular creators appear in the center with users or smaller creators surrounding them. Additionally, participants in the in-depth interviews mentioned using bigger creators in their videos to improve their performance which will be further discussed in the next section.

4.2 Qualitative analysis results

The qualitative analysis results stem from the data collected through the qualitative methods of in-depth interviews and participant observation. These methods seek to answer the following research sub-question: *What is the role of female fitness creators?*

4.2.1 The experience of female fitness creators on YouTube

Female fitness creators all share the same job title, yet they each encompass their own way of conducting business and handling obstacles. Each creator encompasses their own trajectory with some discovering fitness through personal endeavors while others attribute their upbringing to their present role. With the role of female fitness creators, there are three emerging themes: sources of income, challenges of being a creator, and usage of different social platforms.

<u>Sources of income</u>

When it comes to generating income, either income is solely from YouTube or income is from multiple businesses. Three creators revealed that their only income is currently from YouTube monetization such as ad revenue or memberships. Memberships are a way for audiences to pay a small fee and gain access to unique benefits from the creator (Google, 2021). Benefits can include exclusive content or perks based on the creator's choice. An American creator, Penelope, is focused only on YouTube and spent years working to grow her channel as she explains her experience with income on YouTube:

So yeah, people with, you know, 12,000 subscribers, they're not making money. They're just not, it it's not lucrative until it is. And then, and then when it is, you're like, holy moly, there's a lot of money to be made here. Like, it's that weird tipping point where you're like, you know, YouTube is making me almost nothing. And then, and then all of a sudden you have more subscribers and more views and more everything. And it's like, oh, now I know why the people who have a million subscribers are really rich. Like there's a lot of money to be made on YouTube. There really, really is if you are bringing in the views because YouTube wants people to be on YouTube. And if you are the kind of property that can bring people to YouTube, they'll pay you for it (Penelope, United States).

While earning an income from YouTube can range based on subscribers, eight creators generate income from multiple businesses. For many creators, YouTube is not a sufficient enough income, so they manage other business such as selling fitness programs, in-person training or classes, Patreon and more. Through the analysis, multiple creators mentioned that they view YouTube as a free content platform which can drive people to their other businesses. One creator, Jessica, living in the United States explained how YouTube is used as a funnel for her other businesses:

The YouTube income is like […] it's nice that you know I can get ad revenue from YouTube and make a little bit of money each month, which is nothing to scoff at by any means. But I kind of see that platforms, especially as something that drives um potential business over to my business […] I was like, you know, just breaking down my numbers over the quarter um now, I'm at about 60% of the clients that I have, who come regularly even whether it's to group fitness classes with my membership or um personal training clients, from YouTube. Which is absolutely insane that now it's like the majority. So, I really see it more as like a funnel to potentially get clients rather than like its own moneymaker (Jessica, United States).

The sources of income ranging from solely YouTube to the management of multiple businesses, contribute to the role of female fitness creators. More creators have multiple sources of income which is likely due to the little income that YouTube generates if they don't have enough subscribers. Additionally, this research revealed that creators who use popular music in their videos earn minimal to no income due to the copyright issues. Being a creator on YouTube is not profitable until you grow a substantially large audience or are racking up video views.

<u>Challenges of being a creator</u>

Just like any job, challenges are encountered throughout the process leading some to struggle while others thrive. Female fitness creators face personal and societal challenges that have impacted their role. The first challenge every creator mentioned is the ongoing COVID-19 pandemic leading to a shutdown of gyms and sports facilities. While the pandemic shook the world, many of the creators found it to be challenging yet resulting in a positive outcome for their online growth. As more people turned to online platforms for fitness content, many creators decided to launch their own channel at the start while others who were already established encountered significant growth. Jessica, who views YouTube as a funnel to her other businesses, explained how her consistency prior to COVID-19 helped her hit the algorithm and become more visible on YouTube. Even with the positive outcome, Jessica explained that this new growth presents the challenge of managing her well-being as a result of negativity from users. While some benefit from the COVID-19 pandemic, Kelly and Chloe, both creators from Canada, explained their struggle with isolation which created a challenge and a motivation to exercise and create content. Kelly's experience is detailed with the following statement:

Um, and then the pandemic hit and that kind of gave me the kick in the butt because I started, like, I know everybody was struggling. I myself was struggling, especially like I would go to the gym every day and then lockdown happens. So trying to do home workouts were not fun for me [laughs]. They weren't like they weren't, I don't know, wanted something to actually get me out of bed and doing them like doing dance workouts ended up helping me. And then in the long run, it helped others too (Kelly, Canada).

Another challenged faced among the creators is mental health as a result of their job. From pressure to online hate, it is unprecedented for some as they've never had to deal with negativity from strangers. One creator, Melanie, justified the mental effects of receiving negative criticism as a byproduct of being successful. Due to their growing visibility, the participants are learning how to manage the challenges that come with their role as a female fitness creator. The challenges dealt with by female fitness creators range from personal struggles to societal challenges as a result of the transformation of the digital online realm and the global struggle of COVID-19.

Usage of social platforms

As a female fitness creator, part of the role entails establishing yourself across social platforms in order to gain visibility and establish an audience. All 11 creators are established on at least two of the following social platforms: YouTube, Facebook, Instagram, TikTok, Pinterest. Each platform is used for a different purpose even though they sometimes post the same content. Kennedy from the United Kingdom explained that YouTube requires a lot of research to create content whereas on Instagram she posts food or a picture from her walk. Additionally, Jessica discussed how she uses YouTube versus Instagram for her content with the following explanation:

Um, YouTube is definitely more of like, I feel like I have a very educational spin on everything that I put on there. So, um and I and I think it's a great place for me to like really be able to get creative [...] um, Instagram is definitely way more just like, [pause] like my life and here's my cat. And you know that my feed is definitely a little bit more curated to like, the class schedules and, you know, some motivational stuff or whatever (Jessica, United States).

Sasha, a creator from the United Kingdom, is active across many social platforms with YouTube being her core platform. She cross-promotes content using other platforms outside of YouTube to drive

to her channel. For example, a video she posted on TikTok went viral which cross-promoted to YouTube channel leading to increased growth and visibility. She explains her experience with the following statement:

That TikTok got nearly 900,000 views. And I made the TikTok like showing my channel, like what they can find on my channel and that one went crazy. So at that point, the Greatest Showman was at like 15,000 views. And that one really, really skyrocket [laughs] (Sasha, United Kingdom).

The role of being a female fitness creator entails a variety of responsibility as well as different ways to do the job. While some creators solely earn income from YouTube, others strive to juggle income from a plethora of businesses. On top of income, there are challenges endured like the COVID-19 pandemic and mental health. To establish oneself as a creator there must be an online presence and promotion of content across social platforms to drive audiences to the designated platform in order to gain visibility and increase performance.

4.2.2 Navigating the algorithm

The analysis of female fitness creators who have established a strong enough presence, attaining at least 10,000 subscribers on YouTube, continue to experience channel growth. In order to maintain visibility online, there are a number of implemented strategies and practices that became apparent among female fitness creators. The three emerging coding categories that contribute to navigating the algorithm: channel practices, creator strategies and algorithmic gossip.

Channel practices

Channel practices refer to the different methods applied to a YouTube channel by female fitness creators. These types of practices are ubiquitous within the industry as they are implemented by many creators and were noted in the participant observation. The analysis showed that in order to maintain visibility, it is imperative to have a set schedule for publishing videos on YouTube. Some creators set their days based on personal preference, while others opt for using YouTube analytics to support their publishing schedule. YouTube Studio provides analytical recommendations by providing the best days and times to publish videos. The strategy behind the posting schedule varies per creator, however it is important to have one in order to consistently gain subscribers and views. Two creators, Sasha and Kelly, shared contrasting practices when it comes to their posting schedule. Sasha from the United

Kingdom publishes her videos based on what she thinks is the best day for people's goals and she publishes the same time so that her audience will be waiting. On the other hand, Kelly from Canada relies on YouTube analytics to provide her with the best days and times based on her previous performances.

Although the number of postings per week seems to vary per creator, after analyzing the data, the average is about two times per week. Considering the amount of time and effort it takes to develop content, it can be challenging to sustain multiple uploads per week. Albeit it is unconfirmed, creators believe YouTube rewards creators who post frequently (Bishop, 2019). With this widespread notion, frequent posting is a common practice mentioned by many of the creators. The creators' consistent posting schedules on YouTube contributes to their own status and their audience's loyalty.

For video uploads, there are a handful of elements that are believed to contribute to the algorithm and visibility with tagging and keywords being "one of three textual algorithmic signals..." (Bishop, 2018, p.74). Keyword research is a prevalent practice that helps to break-through the plethora of content. Prior to publishing, a variety of keywords are added to a videos description. This practice was mentioned by five participants as a practice for their audience finding them or pushing their content higher up in the page results. American creator Penelope emphasized the connection between YouTube's algorithm and keyword search as a main method to reach her audience.

Um with YouTube, it's all about the algorithm. So um it's keyword search. So I've learned a lot in the past couple of years about the algorithm and keyword search. They found me through 'women over the age of 40', typing that in or 'exercise for women over 40'. And I made sure I made sure that all my descriptions and my my tags, my title, my video, all is women over age of 40. And then from there, they enjoy the video, and we'll do the recommended video (Penelope, United States).

The significance of SEO and researching keywords was discovered by watching videos from other creators for female fitness creator, Jessica. She emphasized the importance of developing content that audiences are seeking while attaching it to relevant keywords will help content gain visibility.

Um, and then the one of the biggest things was just understanding like SEO, because I had no idea how to do like how to research keywords and name a video so that it actually pops up in search, and actually create searchable content. I think that was the biggest thing that I took away was you have to

make sure that you're making videos about things that people are actually looking for otherwise, you're never gonna, you're never gonna be found (Jessica, United States).

Based on the findings from the analysis, the practice of keywords led me to leverage this finding for the social network analysis that was previously discussed. To expand on the practice of research and keywords, three participants mentioned the usage of programs that they use to help them improve their keywords and titles. Two of the participants specifically shared that they use the program, TubeBuddy. TubeBuddy is an extension that integrates into YouTube channels and helps to research and optimize by crafting the best titles and tags for creators (https://www.tubebuddy.com). The advantage of using a program for the creators is that it can boost their ranking and increase their chance of having their videos suggested, or recommended, to users. As creator Pamela explained, it can help shift a creator's position from a tiny fish in a big ocean to a big fish in a small pond. The ranking of videos on YouTube search can be improved if in the video description, there are "three or four keywords from the title and tags" (Piertrobruno, 2018, p.528). This finding shows that researching and incorporating keywords into content is a robust practice along with using external programs to reach users and increase visibility.

The design of the thumbnail was mentioned by six participants and noted in the participant observation. Thumbnails are at the forefront of YouTube videos as they catch the eye and are the main driver for users to click on your channel. It is crucial to design a captivating thumbnail image and tailor the visual to the audience as explained by Melanie who looks at it from both a user and creator perspective:

Um, just making sure that I have a catchy title, catchy thumbnail, really trying to market the video as best as I can, to people that may just be stumbling upon it for the first time. Because I'll actually scroll through the homepage of YouTube on my phone sometimes when I'm bored for fun just to see what's on there. And you're constantly fed all these videos pertaining to you like they're all targeted towards you, depending on your interests. So I think it says a lot if someone is scrolling and specifically clicks on your video like that means you did a really good job with it. And I try my best to do that every time (Melanie, United States).

Designing the thumbnail requires attention to visual details and color as well as text to catch the eye. A unique strategy that creator Chloe mentioned, and it was noted many times in the participant observation, is showing off your body on the thumbnail image. She explained how this practice elicited

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an improved performance and deemed it a successful strategy. Additionally, throughout the participant observation, I noted that all the creators included their fit body on many of their thumbnails. I observed Sophie van Oostenbrugg for the participant observation and this thumbnail practice was consistent as shown in image 2.

With the saturation of content, practices of revealing oneself on a video thumbnail is implemented by YouTube creators across different categories as a way to stand out and gain traction. Between 2011 and 2012, a group of females known as the YouTube Reply Girls gained media attention as they showed their revealing cleavage on thumbnails to drive crowds (Bucher, 2018). Bishop (2020) explains that this tactic shows how "the YouTube algorithm (at the time) simply rewarded clicks and eyeballs" (p.4) which can increase performance by taking advantage of the algorithm. As a result of this ability to game the algorithm, YouTube changed how it operates which seems to constantly be changing or unknown to the outside. Although this practice may be deemed obsolete, it appears to still be prevalent and common among female fitness creators as fitness centers on the concept of being fit and looking fit.
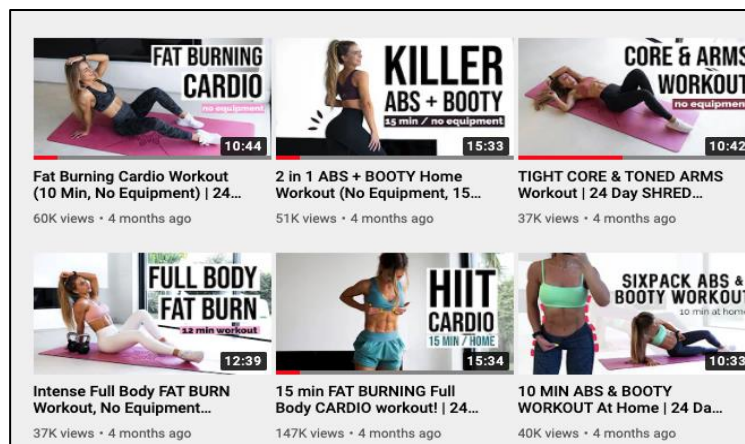
Image 2: *Video thumbnails from Sophie van Oostenbrugg's channel called GAINSBYBRAINS (Source: YouTube)*

A salient practice that proved to be important for female fitness creators is publishing a variety of fitness content. For content creators, they are "advised to be in a constant of testing and refining outputs, to capture more eyeballs" (Bishop, 2020, p.3). By publishing different types of content, the creators explain how they are able to recognize what their audiences like and don't like based on performance. Three creators mentioned that this practice resulted in performance growth. Jessica, who

views YouTube as a funnel, explained how this practice can be attributed to the increase of channel visibility and performance for female fitness creators.

And something that I took from another creator who's more of an expert in this field was like making sure that your content is batched into like three different categories, the stuff that you know, is going to perform well. So for me, a lot of times that's like fitness reviews, because everyone always clicks on those and they tend to do really well and get a lot of subscribers. Um, things that are like fundamental staples of your channel. So for me, that would be like breaking down basic concepts and exercise science. And recently those have been doing really well too, which is awesome. And then another third is just like fun stuff like a vlog or something more random and just the stuff that kind of like keeps your creative juices flowing. And I have found that I've kind of been doing that every month for like the last six months. And I have found that I've had a lot more growth by kind of implementing that, that framework into my uploads, which has been cool (Jessica, United States).

By noting that a specific type of content performs well, creators can leverage this insight by producing more of the same content in order to drive views resulting in increased invisibility. In addition, the development of eye-catching titles is an apparent practice for the creators in order to increase video performance and gain more attention. American creator, Claudia, explained that she will search for a video and then use a similar title to the top videos that appear from popular creators. Similarly, Chloe from Canada used a title framework from a massively popular creator which helped her channel views as explained with the following quote:

And one of the things actually, this kind of goes back to your other question, one thing that drew a lot of people to my channel was the fact that I named my workout some of my workouts based on how many calories they would burn. So I got this idea from Fitness Blender, I saw that they had this one video called 1000 calorie workout and I was like, oh my gosh, this looks badass. Like, what is this? So I looked at their video, and I was like, I'm gonna make one too. So I made that video and that video, still get, like I that posted that video in 2014. And I still get tons of comments on it. It's got like, I don't even know, over over 2 million views, I think, or more than that (Chloe, Canada).

These findings support the notion that creating a video title is an important channel practice as creators apply different strategies to determine which are more effective for video performance. The

title of a YouTube video can influence the ranking of a video (Pietrobruno, 2018). Furthermore, the relationship between title and ranking imply that titles hold a lot of value when it comes to the visibility of creators' channels and videos. The strategy of conducting research and using other creators' titles as a framework both contribute to shaping the channel practice of titles as they can increase channel performance and success leading to increased visibility.

Creator strategies

In conjunction, creator strategies focus on the unique actions applied by each creator to achieve the goal of staying visible and sustaining growth online. Recurring patterns of strategies are apparent from the analysis showing that creators share commonality in order to maintain their visibility. The importance of channel niching is a strategy that was emphasized by five creators. With the crowdedness of YouTube, niching the audience and messaging within the channel is imperative in order to grow and gain recognizability. While each creator carries their own perspective on niching, both Penelope and Pamela, who focus on a specific audience demographic of older women emphasized the importance of niching. They attribute their immense growth with the niching of titles and messaging for a specific audience and category. Both the creators discovered niching to be the key to their visibility and break-through as they honed-in on a certain age range that may tend to be neglected in the online fitness realm. Additionally, another creator, Kelly, recommends niching based on shared advice from their sibling who is a successful YouTube creator. Although niching is an important strategy, however you need to niche with caution as one creator puts it: "You want to have something that is niche but big enough that there's going to be an audience. You just have to find something that's missing and then go from there" (Kelly, Canada). Overall, this finding shows that niching is an important strategy, however creators must be sure that when implementing this practice there is still a big enough audience to reach. If there is a category gap, creators can take advantage of this by tailoring content to fill it. Female fitness creators have discovered how to niche online with their content, messaging, titles and overall branding to advance through the noise.

Furthermore, a prominent finding to gaining visibility is through listening, watching or implementing content of other popular YouTube creators. Six creators divulged they do this in order to learn tips and tricks of navigating YouTube. Jessica revealed she watches other YouTubers who are experts in growing on YouTube such as Sunny Lenarduzzi and Vanessa Lau. On the other hand, Melanie includes popular fitness creators as part of her content as explained in the following statement:

I have to really focus on other creators as crazy as it seems the videos that do the best are the ones where I talk about other people that are already established on YouTube. That's why I sort of created this blueprint like okay, I'm gonna have a lot of my own content on there as well like just telling people about nutrition and fitness but I'm also going to do these YouTuber reviews in the middle. And make it like the primary series on my channel because when I put someone else's name in my title and my thumbnail, I will get more traction because people already know. Like for Chloe Ting, for example, she's like the biggest fitness creator on YouTube. So whenever I make a video talking about her or doing one of her workouts, I get a lot of views from it just because she's so famous. So it's kind of like you have to when you're a small creator, you have to piggyback off of other people. I wish I didn't have to do that, but it's the only way my content is really seen on there. (Melanie, United States).

Including other creators as part of a strategy or as guidance has proved to be successful to become more noticeable online. In addition, using other creators within video content was documented in the participant observation. This includes using the creator's name in the video title as well as in the video thumbnail. By including a massively popular creator in a title, content or thumbnail it can help improve channel rank as users search for the popular creator.

Another prominent strategy is continuously improving one's channel and oneself. From the launch of a channel to the present day, female fitness creators reflect on how their transformation as they strive to keep up with the technology and their audience. Naomi, a Costa Rican creator, details the importance of continuously improving one's channel and oneself:

I need to step up my game and have better quality videos. Um, better quality audio. Um, my clothing, my, everything, my hair, my face, my makeup, my, because when you start, you are not worried about it. You, you just say like, I will record with the clothes I have. I will record looking aside as I am, but then where you are in the eyes of a lot of people from all over the world [...] And always grow, um, what you offer because, um, it's sad, it's very sad to have a lot of followers and you still have like a very poor, um, quality of the videos or very poor, um, I don't know, audio, so it's, it's pressure on all the ways you want to see it as, as you grow, you have to, it's like mandatory to step up your game (Naomi, Costa Rica).

With the need to continuously improve, consistency is one of the most relevant and emphasized attributes in order to grow and maintain visibility. Consistency is applied to every facet of the creator's job such as messaging, branding, publishing and as a person. A total of 8 participants mentioned

consistency as the key to growth. Consistency, according to Penelope, is the biggest factor to growth while Pamela says it is imperative even if no one is watching you. It can be difficult with little to no audience however, it is important to not deviate from a routine in order to increase visibility. In the participant observation, consistency was noted across many of the creators especially when it comes to their branding. A noted observation of creator Bailey Brown's YouTube channel showed her consistency with her branding and channel elements such as thumbnails. This observation is visually shown in Image 3. The titles use capital letters to draw attention to the video content and the thumbnails are consistent in color, text, and image of the creator.
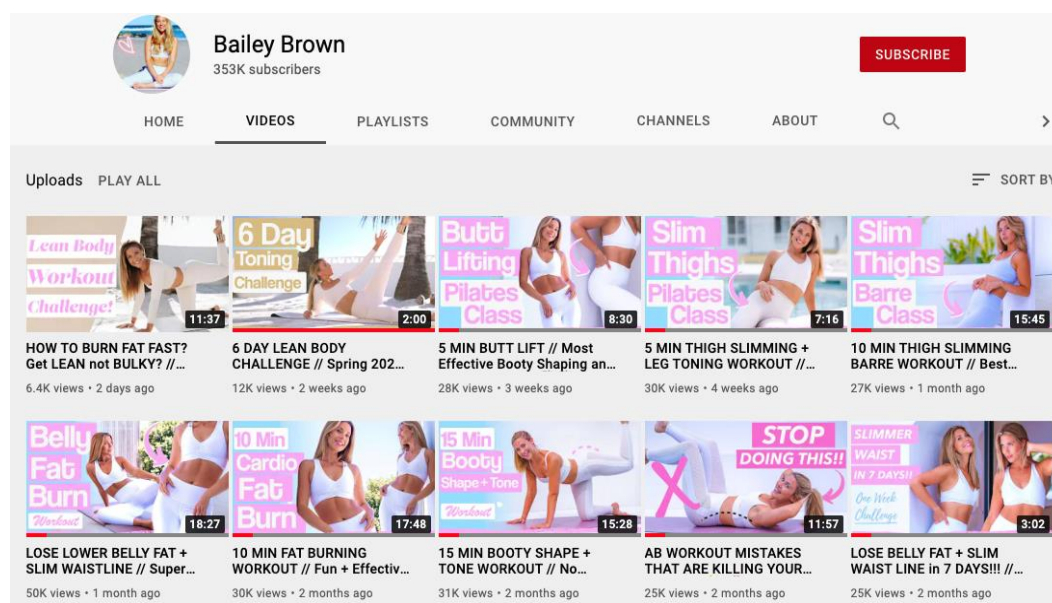
Image 3: *YouTube channel of Bailey Brown (Source: YouTube)*

The last leading creator strategy is hiring or receiving expert help with content creation, YouTube's algorithm and general insight. Eight creators shared that they have no help with producing content or expertise to provide insight about YouTube and its algorithm. However, three creators mentioned they have hired help with their job, which provides an advantage to their strategy and visibility. Rather than learning and managing YouTube themselves, they are basically outsourcing to learn the tricks of the trade on YouTube. Penelope, who has hired help, explains her reasoning with the following statement:

I mean, I've actually hired both of those things out now. Cause I'm like, somebody else can, can do that better than me because that's not what I do [...] I do have a, a YouTube coach, like somebody who is a YouTube expert who is on my team and helps me figure out like here's how to, here's how to work on your messaging. Here's how to work with your thumbnails here [...] But I do think that most people do have somebody kind of helping them and coaching them along the way, just cause it's, it's hard to do everything yourself. It really is. And it's hard to figure out how to do everything yourself. And so how asking questions and having somebody who is an expert say, okay, now here's what you do next. And here's where it will lead to growth (Penelope, United States).

These quotes further explain how bringing in or connecting with people who are deemed YouTube experts has helped improve performance for the creators. According to Bishop (2020), these creators are "invested in becoming visible via YouTube's algorithms and seek expertise" (p.3) in order to become recognizable by the algorithm. As YouTube becomes more saturated, this creator strategy of working with experts to optimize content and gain a stronger understanding of the algorithm aims to help creators manage their visibility.

<u>Algorithmic gossip</u>

Navigating the algorithm is a challenge for creators, especially with YouTube's algorithm being deemed a 'black box.' Bishop (2019) investigates the concept of algorithmic gossip which is based on strategies or theories that have been formed by creators when it comes to managing their visibility. While some creators perceive YouTube's algorithm as unknown others voice confidence of its system and practices believed to cause algorithmic bias. The ambiguity of the algorithm is a widespread thought among creators as they attempt to unravel YouTube's algorithmic recipe. In Sasha's experience, the YouTube algorithm is perceived as luck because she believes no one knows how it operates, apart from YouTube. While uncertainty is evident, Pamela and Penelope believe they know how to feed the algorithm and increase their visibility. Pamela details her knowledge and understanding of the algorithm:

Um with YouTube, it's all about the algorithm [...] and you know, the funny thing is with YouTube, the more people watch it, the more YouTube spits you out in the algorithm. So then more people then watch you and it's it's just trying to get that first initial umph so that the algorithm does pick you up. So they take, you know, they take a look at are they being YouTube, your watch time, um

subscribers, and how many links that you have to other YouTube videos in your description. There's all

these little pointers that your little tips that you can do to help boost you so that you become part of that

recommended search at the top when you're watching a YouTube video and, um and then yeah, get that

organic click [...] so it's all about really keeping YouTube happy (Pamela, Canada).

Learning how to please YouTube is imperative to maintain visibility, however it is interesting to note that Penelope and Pamela retain a stronger grasp on the algorithm than the other creators and they were previously mentioned as they have hired YouTube experts to help them. This finding shows that creators who are confident in navigating YouTube's algorithm are likely to have someone guiding them.

Creators spilled strategies of algorithmic bias learned through their own experience or from other creators. For creators on Instagram, O'Meara (2019) highlights the formation of creator communities called engagement pods to improve each other's performance due to the algorithmic bias. This leads creators to implement strategies and avoid others that are known to inhibit their visibility (O'Meara, 2019). One creator first-handedly revealed her experience of algorithmic bias stating, "Just because I took took a lot of time off [...] so I stopped posting regularly and when you do that on YouTube, it seems like YouTube kind of punishes you by like, never promoting you again" (Chloe, Canada). To confirm this bias, Jessica shared her learned knowledge on this topic with the following statement:

Um, the biggest thing is just again, like, the worst thing you could do would be to like take two

months off from uploading it just, you know, once you kind of like find your place within the YouTube

algorithm, it's like, if you step away from it, you kind of have to climb that, that hill again (Jessica, United

States).

Throughout the participant observation, a hiatus was noted as a contributing factor to stunting growth on YouTube. Chanel Coco Brown, a female fitness creator, took a four week break while the participant observation took place which was recorded. The following notes were taken almost a month apart:

She has not added any new YouTube videos, but based on her new video she is likely planning to

come back to posting more on her channel. She took quite a long time off of posting which made her

invisible and slow her growth as we can see since she posted a new YouTube video a week ago and her

subscriber number hasn't moved. (Personal field note recorded on April 2, 2021)

There have been no new videos added to her YouTube channel in one month, which is harmful to

grow on the platform. As a result of her lack of consistent posting, her video slowed in views and

comments as it isn't being picked up by the algorithm. (Personal field note recorded on April 30, 2021)

Additionally, lack of engagement is another factor that can induce algorithmic bias for creators. Engagement is a valuable part of growing an online audience as it establishes a connection between the creator and its audience. Just like influencers, creators "view engagement both as a measure of their own success and a means of increasing visibility" (Cotter, 2019, p.903). If a creator is not responding to their audience, it could lead the audience to stop engaging or unfollow them. This strategy is addressed by Kennedy who heard gossip from other creators, but questions if it matters.

For example, people say, I think one of the ones that I used to always hear was don't not reply to

comments. It's really important. Whereas I know so many YouTubers who don't reply to comments, so

I'm like does that have an impact? I'm not too sure. I guess it would technically cuz it brings the numbers

up, but you can not comment and your video would do just fine, for example. So that's the one I hear all

the time, but I'm like, mm, does it? (Kennedy, United Kingdom).

The creators navigate the algorithm through algorithmic gossip since they hear and observe strategies that are then tested, communicated or shared. In Bishop's (2018) study on beauty bloggers, she noted a finding that can be applied to this group of creators as well, "as vloggers strive for visibility on the platform, their understandings of YouTube's algorithmic processes are learned and embodied within their own practices" (p.70). Channel practices and creator strategies are part of navigating YouTube's algorithm as each female fitness creator discussed their own strategies that they abide by and practices that are implemented in order to sustain their growth and gain visibility.

4.2.3 Online fitness community

Female fitness creators represent the online fitness community as a professional who provides fitness content for an audience. Within the community, there is the relationship between the creator and their audience. This relationship is mainly conducted through engagement such as a like, comment

or personal message. Moreover, there is the community of fitness creators who develop relationships with each other offline and online. In this sub-theme there are three categories: audience engagement, creator engagement, and fitness creator community.

<u>Audience engagement</u>

Audience engagement is an important part of the creator getting to know their audience. The participant observation noted several types of ways that audiences engage with the female fitness creators on YouTube. Although there are some anomalies, generally most comments share similar patterns. While observing video comments from Canadian creator Kelly's YouTube channel, many comments show users asking the creator fitness questions (see Image 4) and asking her to create a specific type of workout video (see Image 5). These types of comments can benefit female fitness creators as it can provide ideas for the channel practice of publishing a variety of content. Since creators may not know what their audiences likes and dislikes, this can help guide their content creation. Along with specific fitness related comments, a lot of engagement focuses on complimenting and showing appreciation for the creator.
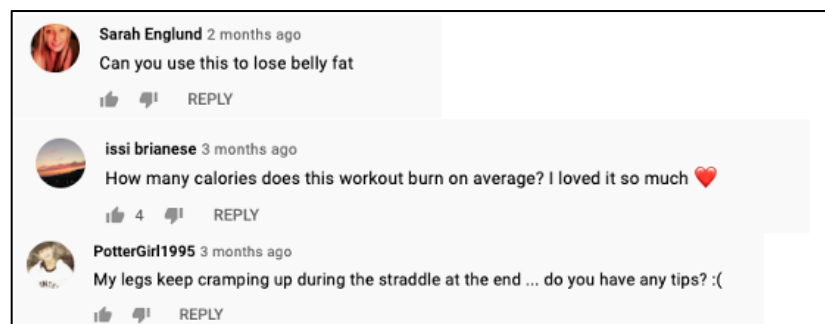
Image 4: *Fitness questions as comments from Kelly's YouTube channel (Source: YouTube)*
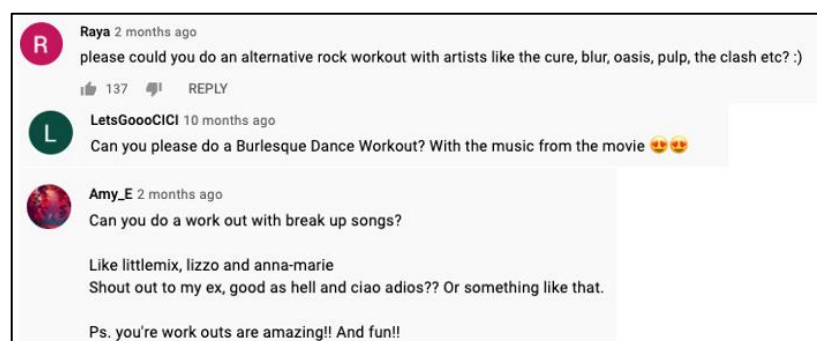
Image 5: *Content request from Kelly's YouTube channel (Source: YouTube)*

It can be challenging to obtain personal contact with a creator, so many individuals ask questions or for a type of workout to potentially receive a response. Sometimes creators will respond but it depends on their engagement strategy and influx of comments. The type of audience engagement contributes to forming respective communities for creators. Next, we will dive into how creators engage with their audience based on the engagement previously discussed.

Creator engagement

For creators, audience engagement is a prominent part of their overall success and visibility. As creators grow within the online fitness community, engagement and audience size will also increase. This leads some creators to find it challenging to keep up with their large audiences, while others have help or smaller audiences that to help manage their engagement. Sasha revealed her engagement strategy and the importance of engagement.

I just try to reply to every single comment that I get. And I do always ask people, like if they, if they have a request and I always like to ask them, like, what kind of songs would you like? [...] I, of course my, my main goal is to grow, but, but I think I have to put main focus on the subscribers that I have [...] so it's the main focus is, is growing, but it's also my current subscribers, what they want. And without with, with all my themed workouts this way, I probably will be growing (Sasha, United Kingdom).

However, another creator who possess a copious number of subscribers shares her strategy for her audience engagement as managing it can be quite difficult:

And I try to, I have this rule of thumb that for the first 24 hours, no 48 hours that every video is uploaded. I reply to every comment. And then unfortunately after that, I can't reply to them [...] and I like to also think that the first 48 hours are essentially the people who are already subscribed to you and anyone after that might be someone new [...] you have to just focus on your community. You have to really listen to what they talk about, what they want. And you learn these things from replying to comments, looking at DMs and, if anything, that's your biggest form of research than anything (Kennedy, United Kingdom).

Overall, engagement for female fitness creators is important for their visibility in the online fitness community. As their role entails serving and developing a connection their audience, they must also engage with their audience by responding or listening to their feedback in order to meet their audiences' needs.

Fitness creator community

In addition to the community of creators and their audience, there is also a community formed of fitness creators. The female fitness creators are part of a community of practice which connects people with a "concern, problems or a passion for a topic, and whose knowledge and expertise is deepened by mutual interaction" (Wenger et al., 2002, p.4) Due to their job mostly being online, various creators have had minimal contact with other fitness creators. However, many creators shared their experience connecting with other fitness creators they've met through their role. Kelly, who uses a 48-hour strategy, also explained how she connects with other fitness creators through comments and direct messages:

They'll either comment on your video or be Instagram. I remember Lily Sabri commented on one of my videos once, and then she just DM'd you know a voice noting, and then you just end up talking that way [...] either you comment on their videos or they comment on your videos or they reach out to you on Instagram, just to say, well done. Like some big creators will just message and say, oh, I saw your video you're doing so well or you're growing so quickly. I just want to tell you, keep going. Like, there is that very supportive community, especially that comes from being a creator as well, which is like, it's really nice when you're a lot smaller than them to hear that (Kennedy, United Kingdom).

Aside from connecting via comments or direct messages, Jessica explained the mutual benefit of connecting with other fitness creators with the following quote:

Um, I'm being able to, like, pick other people's brains and you know, see how other people run things [...] And I think it's such a cool opportunity to like, learn from other people because, you know, even though there is some negativity in the fitness world, I do find that like instructor to instructor or creator to creator, like everyone is very much about helping each other and helping each other grow and learning from each other, too (Jessica, United States of America).

Image 6: *Visualization of Kelly's network (Source: Gephi)*

To elevate the findings on the fitness community for female creators, I produced a second visualization from a SNA by selecting participants of this research to analyze their network. I selected the data from Kelly's YouTube channel to analyze her user network and engagement as shown in image 6. There are 176 communities according to the modularity report. It is a directed network and there is a minimum degree range applied was seven with a self-loop filter which produced 72 nodes and 169 edges. The nodes are users within Kelly's network and the purple edges represent video comments. The Yifan Hu layout visualization is a blossom-like shape showing that Kelly comments and answers comments from users which signifies her engagement reciprocity on YouTube. The many nodes within her network reveal her well-connectedness with other users. Based on the edge thickness, Kelly's interaction is more frequent with the nodes, or users, that are connected with a thicker edge. The thinner edges, located further away from the center, suggest there is interaction of engagement but less frequent.

In the data set that is not visible from the visualization, I noticed one of the users connected to Kelly's network is Sasha whom I also interviewed. This connection is the result of sharing a niche to a specific type of fitness workout within the community. Kelly has four times the number of subscribers as Sasha, which insinuates that Sasha strives to engage with a popular creator within her niche through comments. An implication from this social network visualization is that a video comment from a user can

allude to one either striving to join a community, make connections within the community or showing appreciation for an already established connection within the fitness community.

Based on the findings discussed, the algorithmic gossip learned or discovered is applied by the creators to navigate the algorithm. The qualitative methods carried out support the second sub-question, *what is the role of female fitness creators?* Each female fitness creator encompasses their own experiences and techniques, however their role involves enduring challenges, generating income and using a variety of social platform. With the challenges faced, implementing the right creator strategies and channel practices while avoiding others can lead to growth and creator relationships within the fitness community, which is mutually beneficial when having someone to relate to. Creator engagement is imperative to the online fitness community and the role of female fitness creators. This can help creators establish rapport with their audience and can lead creators to connect with other creators through a comment or personal message. Micro-creators may engage with macro-creators to strive to establish a relationship or to grow themselves. The female fitness creators learn and problem-solve to navigate the algorithm of online platforms and break through the crowd in order to improve their online performance. Overall, female fitness creators denotes that their responsibilities, challenges, online presence, and content associates them as part of an influential and ever-growing online community across the world.

5. Conclusion

This research embraced a unique angle by analyzing the management of visibility with YouTube's algorithm from the viewpoint of female fitness creators. The literature review of existing research and theoretical frameworks brought in were supportive for the grounded theory approach. However, it also implies that there is a gap in existing research centered around female fitness creators combined with management of visibility for YouTube's algorithm. The data collection from the three methods conducted supports the overall main research question. Through the research, it is evident that female fitness creators encompass their own unique ways of managing their visibility, but also share commonality in their actions, experiences and beliefs. When formulating how visibility management with YouTube's algorithm is carried out by female fitness creators, there are a collective number of noteworthy findings that will be address in this final chapter based on the research conducted.

The first finding highlights how their role including income, challenges and multiple social platform presence contribute to female fitness creators' management of visibility with YouTube's algorithm. They've battled and triumphed with the impact of the fitness industry due to the onset of the global COVID-19 pandemic. This ties into Godefroy's (2020) discussion regarding the closing of businesses leading fitness influencers to turn to social media to continue their role. The research shows that each creator uses a variety of social platforms, generates income from one or multiple sources, and endures different challenges. These elements contribute to how visibility is managed as female fitness creators use different social platforms to improve their performance and grow their audience. For some creators, by leveraging a platform such as TikTok, they have reached new audiences by publishing content and cross-promoting their YouTube channels. In alignment with Khan's (2020) discussion, female fitness creators leverage the popular social platforms as a way to carry out different objectives per platform, promote themselves and grow their audience. This part of their role exemplifies how being present on multiple social media platforms is a way for female fitness creators to manage their visibility with YouTube's algorithm, given its black box nature, by reaching different audiences to drive them to their YouTube channel.

Additionally, their visibility is affected by their source(s) of income and the implementation of practices and strategies to grow their audience based on their sources of income. This tactic allows them to drive their audience to their outside businesses which can turn them into clients. By using YouTube as a funnel, they are able to optimize their growth on YouTube which can boost their external sources of

income. The elements of the role of female fitness creators contribute to how they carry out tasks as part of their visibility management.

The second prominent finding reveals how the navigation of YouTube's algorithm plays a part in their management of visibility. The collection of practices and strategies that female fitness creators carry out on YouTube uncover that each creator chooses to apply certain practices and strategies that they've learned from various sources in order to control their visibility. These unique actions per creator, all share the same emphasis of consistency that is applicable to all practices and strategies discussed in the results. Female fitness creators attribute consistency to an important part of their online behavior and ability to grow on YouTube. Consistency is imperative to gain visibility because it can help to sustain momentum with YouTube's algorithm by having a publishing cadence or actively engaging with audiences to keep the creators' content being served to users.

Along with the array of practices and strategies carried out to manage visibility, the information and knowledge about YouTube's algorithm are easily accessible and absorb by female fitness creators. The results show that many female fitness creators leverage other creators in order to grow with many of those popular creators sharing the need to be consistent. These creators or as Bishop (2020) calls them 'algorithmic experts' are part of the algorithmic gossip as many of the female fitness creators have learned practices, strategies, and actions to avoid from them as a way to manage their visibility. The ubiquitous information surrounding the algorithm drives each creator to perceive YouTube's algorithm in their own way by executing tactics that they are certain will help influence their prominence.

In addition to the practices and strategies implemented, the female fitness creators shared information connecting to Bishop's (2019) concept of algorithmic gossip that explain how actions such as lack of publishing or engagement can cause algorithmic bias for creators. As previously mentioned, the creators attain information and knowledge through observation, seeing, and hearing from other creators. Due to YouTube's algorithm being deemed a black box, (Bishop, 2018; Bucher, 2016; Kitchin, 2017) this information and knowledge is more speculation than fact. There is ambivalent understanding of how YouTube's algorithm works among female fitness creators which leads them to try out different tactics learned in order to see what works and what doesn't when it comes to managing their visibility. By navigating YouTube through algorithmic gossip, a lack of consistency such as taking a hiatus will cause female fitness creators to lose the visibility gained through their role and consistent efforts as a result of YouTube's black boxed algorithm. Female fitness creators are aware of potential bias which alludes to the emphasis on the need to be consistence when it comes to managing their visibility.

The last prominent finding in this research centers on the online fitness community for female fitness creators. As these creators establish themselves online and publish content within the fitness realm, it leads them to be associated with the category of fitness and be recognized as a member of the online fitness community. Although some creators do not feel that they are part of the fitness community due to their small audience size or lack of connection to other fitness creators, others feel very a part of it. This community is made up of a range from smaller creators to massively popular creators. For smaller creators, their association with popular creators in the community is a way for them to manage their visibility and grow their audience by establishing a connection. As a result of growing visibility, female fitness creators collaborate with other creators or engage with them for empowerment, support, information or questions. Being part of the online fitness community allows the female fitness creators to manage their visibility through creator strategies such as using a popular creator in their video content, titles and keywords. As shown in the social network analysis, there are many fitness communities that are interconnected by users or creators that share similar strategies or practices. Through the use of certain prominent keywords within the category of fitness, female fitness creators can find themselves appearing alongside some of the most popular female fitness creators which establishes an association or connection.

Furthermore, engagement for the creators is an important part of their online community and is an instrumental part of how they manage their visibility with YouTube's algorithm. Engagement is perceived by female fitness creators as a way to develop a relationship with their audience and keep their audience returning to their channel. Although each creator implements their own engagement strategy, they all partake in consistent engagement in order to sustain their growth. As YouTube's algorithm serves their content, the surge in audience growth leads them to engage by leaving comments or liking their YouTube video while creators reciprocate with a response or some kind of acknowledgment. The social network analysis showed the formation of communities based on video comments between creators and users, and with smaller creators leaving a comment on a more popular creator's video. This engagement can lead to a new relationship for female fitness creators within the community, and it can also lead users to find a smaller creator through comments which contributes to gaining recognizability with YouTube's algorithm.

When it comes to YouTube's black boxed algorithm, female fitness creators manage their visibility through many facets relating to their role and online community. Their role on a personal level fosters the type of creator they convey through their challenges, incomes and way of using social media platforms. On YouTube, there are strategies and practices behind their behavior which stem from the

information and knowledge learned through hiring help, algorithmic gossip and other creators. By combining their role and navigating YouTube, this helps immerse female fitness creators into the online fitness community. Through the actions carried out by their role and algorithm navigation, they influence their visibility as their audience and creator relationships grow.

When reflecting on the research, there are a few limitations with the research and investigation. First, the bandwidth of time to do the research study required certain tasks to be carried out in a shorter manner. In order to have enough time to do interviews, transcribe and code the data, the interviews needed to be finished in a timely way. If there was more time, it would allow for more participants which would lead to greater generalizability for the study. Second, this study was limited to female participants as I wasn't able to connect with male fitness creators. Unfortunately, among the 136 emails I sent, I didn't receive many responses from males and the few that responded were not interested in participating. Perhaps if there was more time, I would have been able to interview males to study the population of the general online fitness community. Since the findings were from a female perspective, it is unknown if males would share different opinions and experienced that would lead to different findings. Also, my role as the researcher specifically being a female, could impact the study as the female participants may have provided certain comments or expressed opinions that were due to comfortability and relatability. Lastly, there is a lack of research on this area of study which made it more challenging as I was using existing research as guidance in order to establish my area of focus.

This research built a robust foundation for future explorations of this topic and area of study. In the future, it would be valuable to research other categories of creators on YouTube and how they manage their visibility with YouTube's algorithm. This would allow for analyzation of similarities and differences between fields of creators and their navigation of YouTube. Additionally, it would be fascinating to examine the female fitness creators whose main core platform is not YouTube, but another social platform such as Instagram or Facebook. It could set up for a comparative study between the same type of creators who focus on different main platforms to study their management of visibility. Based on the findings from this research, the connected communities can be further explored through different data sets based on videos and a variety of keywords. Overall, this research can provide strong support for future studies and for optimizations made by creators in order to manage visibility with algorithms.

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Appendices

Appendix A. Interview consent form

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

Shayna Kudler
shaynakudler@gmail.com
NL: +31 0642535633
U.S.: +1 8058079965

You are invited to participate in a research about social media. The purpose of the study is to understand the fitness creators evolvement on YouTube**.**

Your acceptance to participate in this study means that you accept to be interviewed. In general terms,

- ☐ the questions interview will be related to fitness and social media
- ☐ your participation in the experiment will be related to the purpose of the study
- ☐ my observations will focus on your experience

Unless you prefer that no recordings are made, I will use a tape / video recorder for the interview.
You are always free not to answer any particular question, and/or stop participating at any point.

RISKS AND BENEFITS:

A. As far as I can tell, there are no risks associated with participating in this research. Yet, you are free to decide whether I should use your name or other identifying information [such as] not in the study. If you prefer, I will make sure that you cannot be identified, by [measures that will be taken: pseudonym, general identification only mentioning age and gender, etc.].

B. I am aware that the possibility of identifying the people who participate in this study may involve risks for your reputation, help, social relations, etc. For that reason—unless you prefer to be identified fully (name, occupation, etc.)—I will not keep any information that may lead to the identification of those involved in the study. I will only pseudonyms to identify participants.

I will use the material from the interviews and my observation exclusively for academic work, such as further research, academic meetings and publications.

TIME INVOLVEMENT: Your participation in this study will take one hour. You may interrupt your participation at any time.

PAYMENTS: There will be no monetary compensation for your participation.

PARTICIPANTS' RIGHTS:

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACTS AND QUESTIONS:

If you have questions about your rights as a study participant or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish— Erasmus University.

SIGNING THE CONSENT FORM:

If you sign this consent form, your signature will be the only documentation of your identity. Thus, you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

I give consent to be audiotaped during this study:

Name   Signature   Date

I prefer my identity to be revealed in all written data resulting from this study

Name   Signature   Date

This copy of the consent form is for you to keep.

Appendix B. Videos and comment threads from Bailey Brown

Video title	Total comments	Video URL
Full Body Tone-Up in 28 Days <3 Complete Workout Program + Training Guide for 2021	55	https://www.youtube.com/watch?v=eHPqlUOV_-Q&ab_channel=BaileyBrown
Lose Belly Fat + Slim Waist in 7 Days!! // One Week Home workout Challenge	38	https://www.youtube.com/watch?v=j5SHyk8LbNE&t=1s&ab_channel=BaileyBrown
Advanced Full Body Mat Pilates	57	https://www.youtube.com/watch?v=ycuEnwLVUEY&ab_channel=BaileyBrown
5 minute flat abs 7 toned arms <3 no equipment mat pilates workout	35	https://www.youtube.com/watch?v=eulxjPjcav8&ab_channel=BaileyBrown
Pilates for abs and arms <3 standing pilates toning workout	64	https://www.youtube.com/watch?v=GWRTolesvrM&ab_channel=BaileyBrown

Title: Advanced Full Body Mat Pilates
URL: https://www.youtube.com/watch?v=ycuEnwLVUEY&ab_channel=BaileyBrown
Comments: 57

ななです almost 3 years ago
Would love to see a longer workout! 40minutes-1hr?? ;)
REPLY   21

   Bailey Brown almost 3 years ago
   That's a great idea! Will definitely film a longer one! Thanks gorgeous xx
   REPLY   5

   Andrea Josefine almost 3 years ago
   PastelMint Yesss 😍😍
   REPLY

Caroline almost 3 years ago
I absolutely love all of your workouts and I've been doing 2 a day since I found your channel!!!! I honestly don't understand how you don't have more subscribers
REPLY   6

   Bailey Brown almost 3 years ago
   Aw thanks so much Im so glad you like them lovely!! hahaha Im sure people will catch on over time xx
   REPLY

Bailey Brown almost 2 years ago
I hope you loved this workout! If you want NEW full length workouts check out my online studio https://www.bbfit.co 💕
REPLY   5

alessianika93 almost 3 years ago
Loved it! 😍😍😍
REPLY   2

   Bailey Brown almost 3 years ago
   YAY!! Will film more advanced mat work this weekend!
   REPLY   2

B Brooke Sandston almost 3 years ago
Amazing workout! Loving the advanced workouts!

REPLY   2   👍 👎

> Bailey Brown almost 3 years ago
> Yay thanks lovely!! I will film more xx
>
> REPLY   👍 👎

Sarah Bineau almost 3 years ago
That workout was hard but finishing it made me so happy !!

REPLY   2   👍 👎

> Bailey Brown almost 3 years ago
> Amazing job!! It is SO much harder than it looks! <3
>
> REPLY   👍 👎

Holland Elliott almost 3 years ago
I love this one!! Just tried it this morning! Loving the advanced stuff

REPLY   2   👍 👎

> Bailey Brown almost 3 years ago
> So happy to hear it!! I always want to post videos that are challenging, like a real in class, studio experience at home <3
>
> REPLY   👍 👎

Anxhela Mast almost 3 years ago
Just finished this workout!! Damn i am sweating😂, but it feels amazing though 😍👌

REPLY   2   👍 👎

> Bailey Brown almost 3 years ago
> It's so crazy isn't it!!! Really burns, taught it in one of my Pilates classes last night!! So good xx
>
> REPLY   👍 👎

S Samantha almost 3 years ago
Would this go well with a cardio workout such as running or is this cardio itself?

REPLY   2   👍 👎

> Bailey Brown almost 3 years ago
> This one is a toning workout which you can do on your own or add on to a cardio workout like running or skipping rope xx
>
> REPLY   👍 👎

> Magui almost 3 years ago
> I did it after a good run :)
>
> REPLY   👍 👎

S Susan Fusuma 11 months ago
I love love how you take Pilates to a much higher level so we feel that burn!

REPLY   1   👍 👎

a angela stella over 2 years ago
One of my favs for sure, want more

REPLY   1   👍 👎

> Bailey Brown over 2 years ago
> Aw thank you!!! You should try the recent tighten and tone on this channel! It is similar 💕💕
>
> REPLY   1   👍 👎

E Elina B over 2 years ago
burrn like crazy

REPLY   1   👍 👎

> Bailey Brown over 2 years ago
> Yes!!!! Love that burn 🔥
>
> REPLY   👍 👎

Paul Davies almost 3 years ago

Hi bailey total beautiful and amazing and inspiring bailey please please do more advanced mat pilates bailey please do a mat pilates with scissors in the air and inverted bicycle and feet thanks for shareing bailey your awsome you rock

REPLY   1   👍 👎

> **Bailey Brown** almost 3 years ago
>
> So happy you liked the video!! Thanks so much for the comment, will keep those exercises in mind when planning workouts :)
>
> REPLY   👍 👎

Ankiii Buttner almost 3 years ago

Hi Bailey, do you know how many calories you are approximatly burning here?

REPLY   1   👍 👎

> **Bailey Brown** almost 3 years ago
>
> great question, it would be different for everyone based on your gender, age, height, and weight - you would have to enter those stats in a calorie burn calculator online or wear a heart rate monitor to know approximately how many calories you're burning. There are lots online if you google it 💕💕💕
>
> REPLY   👍 👎

RaShante Snowden almost 3 years ago

I have to say this is my new favorite workout!!! I loved the new combos you added to this workout video!!! You really know how to work the body and I feel so accomplished too!

REPLY   1   👍 👎

> **Bailey Brown** almost 3 years ago
>
> YAY I'm so happy you liked it!! I've started filming the more advanced combos I teach in live classes <3 I have a lot more coming soon! X
>
> REPLY   👍 👎

Sherry Buccieri almost 3 years ago

Great, challenging workout. Thank you!

REPLY   1   👍 👎

> **Bailey Brown** almost 3 years ago
>
> Im so happy you liked it beauty!!
>
> REPLY   👍 👎

ana love almost 3 years ago

What self tanning products do you use?

REPLY   1   👍 👎

> **Bailey Brown** almost 3 years ago
>
> I use Bondi Sands extra dark foam - I also have adjusted the saturation on this video to make the colours stand out a bit more so it looks a bit darker than it is in person xx
>
> REPLY   👍 👎

> **ana love** almost 3 years ago
>
> Bailey Brown do you know if bondisands products are nontoxic?
>
> REPLY   👍 👎

> **Bailey Brown** almost 3 years ago
>
> I don't sorry love! Maybe check their website? xx
>
> REPLY   👍 👎

sarus1 almost 3 years ago

Do I have to do a warm up before?

REPLY   1   👍 👎

> **Bailey Brown** almost 3 years ago
>
> If it's your first movement of the day you can do some dynamic stretches before, i will film a warm-up this weekend xx
>
> REPLY   👍 👎

Laura P 3 months ago

Thank you! Love it! I did it with weights 🥰

REPLY   👍 👎

Nhel Somera 5 months ago

LOVE THIS!!!!🖤

REPLY   👍 👎

tak usia 7 months ago
Useful as always 👌 so sweaty 😅
REPLY 👍 👎

Lynda Rieder 8 months ago
Love this! Will try with ankle weights next time!
REPLY 👍 👎

Saanvi Aghera 9 months ago
The combination is so good I really enjoyed the workout 😍 👌
REPLY 👍 👎

Esther Shilian 10 months ago
Thank you for your amazing work out . could we have some workout to make strong pelvic Please?
REPLY 👍 👎

elena munafò 10 months ago
Hi Bailey! I recently discovered your videos and I'm doing them everyday. I'm seeing such good results and for the first time I also enjoy doing exercises. Thank you!
REPLY 👍 👎

Sumi Kantharia about 1 year ago
Such a lovely workout 😊big appreciation
REPLY 👍 👎

Jewels Sanborn about 1 year ago
Thank you Bailey! You're my favorite Pilates Instructor.
REPLY 👍 👎

    Bailey Brown about 1 year ago
    thank you so much 💕
    REPLY 👍 👎

Andrea Harris about 1 year ago
Omg!!!! Living and feeling so good! Your workouts are on fleek!!!!
REPLY 👍 👎

    Bailey Brown about 1 year ago
    Thanks gorgeous 🥰💕
    REPLY 👍 👎

Sinéad O'Neill about 1 year ago
I'm finding the 5min workouts(ALL of them) amazing to ease back into training after being ill. Feeling the burn!!!! Xxx
REPLY 👍 👎

    Bailey Brown about 1 year ago
    Proud of you! 😘💕
    REPLY 👍 👎

Lisa Yena over 1 year ago
Wow, this was fun to do & effective. I loved these moves, not boring at all. Thanks Bailey
REPLY 👍 👎

Bailey Brown about 2 years ago
I hope you loved this workout! Make sure to check out my Instagram for daily motivation, FIT TIPS and bonus workouts and challenges! https://instagram.com/baileybrwn 💕 Love, Bails xx
REPLY 👍 👎

Melly Ayala over 2 years ago
Por qué ponen los subtítulos tapando la imagen, deben ir arriba dónde no estorben
REPLY 👍 👎

    Bailey Brown over 2 years ago
    I think you can either make it full screen or turn them off and just follow along. Sorry maybe I shouldn't add them? I've heard they block a lot of the video <3
    REPLY 👍 👎

    Melly Ayala over 2 years ago
    Bailey Brown, omg! No creí que me fueras a contestar!!
    REPLY 👍 👎

Appendix C. Interview guide

Ice breakers	1. Tell me about yourself and how your connection to fitness developed?
	2. How did you envision your fitness trajectory evolving?
	3. Is this your only source of income?
	4. What is your favorite aspect of being a fitness creator?
Social platforms	1. What social platforms do you currently use to share your fitness content?
	2. Among your active platforms, how do you use each platform differently?
	3. Which platform do you find the most challenging to grow your audience and why?
	4. How does your audience find you?
Algorithm/visibility	1. How did you learn to navigate social platforms?
	2. In order to sustain your growth and to be seen by bigger audiences, what do you do?
	3. How have you learned to become discoverable by users online?
	4. How do you find YouTube compares to other social platforms when it comes to breaking through the crowd?
	5. Which of your videos to-date has performed the best and why is that?
	6. Do you think it is more challenging to get noticed online or to maintain your
Tactics	1. What are your main online practices as a fitness creator?
	2. What among your practices have you noticed significant help your channel performance?
	3. What practices have harmed your online presence or which ones do you avoid that harm your channel?
	4. In terms of your social profiles, what kind of benchmarks have you set for yourself when it comes to subscribers, followers, likes etc.?
	5. How do you engage with your audience?
Communities	1. Who are some popular creators within your community that you have developed relationships with, or you idolize?
	2. How have you connected with other members of the fitness community?
	3. Is there an online place to connect and communicate, if so, what is it?
	4. What advantages do creator relationships within your community provide for you?
	5. Do you consider yourself part of the fitness and health community? If so, how?
Wrap-up	1. How do you plan to sustain your online presence within the fitness community?

	2. What is a piece of advice you would share for an individual who is passionate about fitness and would like to make it a full-time career through social platforms?
	3. What do you love the most about sharing your passion for fitness online?

Appendix D. Table of in-depth interview participants

Participant No.	Pseudonym	Gender	Date of interview	Region	Title	Number of YouTube subscribers
1	Kennedy	Female	5/03/2021	United Kingdom	Creator	293K
2	Claudia	Female	10/03/2021	United States of America	Creator	20.1K
3	Penelope	Female	11/03/2021	United States of America	Creator	205K
4	Sasha	Female	24/03/2021	United Kingdom	Creator	71.3K
5	Naomi	Female	31/03/2021	Costa Rica	Creator	108K
6	Kelly	Female	01/04/2021	Canada	Creator	272K
7	Jessica	Female	09/04/2021	United States of America	Creator	14.6K
8	Chloe	Female	13/04/2021	Canada	Creator	192K
9	Bella	Female	16/04/2021	United States of America	Creator	84K
10	Melanie	Female	21/04/2021	United States of America	Creator	27K
11	Pamela	Female	23/04/2021	Canada	Creator	53.1K
12	Linda	Female	09/03/2021	United States of America	User	N/A

Appendix E. Participant observation creators

Name	Creator name	Gender	Region	URLs observed	Number of YouTube subscribers
Sophie Van Oostenbrugge	GAINSBYBRAINS	Female	Netherlands	https://www.youtube.com/channel/UCTINyyRItvST779DOPnB-Yg https://www.instagram.com/gainsbybrains/ https://www.tiktok.com/@gainsbybrains?lang=en https://www.gainsbybrains.com/	354K
Bailey Brown	Bailey Brown	Female	Australia	https://www.youtube.com/channel/UCSld2X4CREfM9J3f485kEgQ https://www.instagram.com/baileybrwn/ https://www.instagram.com/bbfit.co/ https://www.tiktok.com/@baileybrwn?lang=en https://www.bbfit.co/	358K
Chanel Coco Brown	Chanel Coco Brown	Female	United Kingdom	https://www.youtube.com/channel/UCqXN8I3uarfN0-Jn3CQlkMQ https://www.instagram.com/chanelcocobrown/ https://chanelcocobrown.com/	164K
Yash Sharma	Yash Sharma Fitness	Male	India	https://www.youtube.com/channel/UCZ8vnZHP1B7QM-UsqL38ROA https://www.instagram.com/markwillmorefitness/ https://www.tiktok.com/@markwillmore	470K
Mark Willmore	Mark Willmore Fitness	Male	United States	https://www.youtube.com/user/YASHSPARX https://www.instagram.com/alphayash/	58.7K

Appendix F. Coding Tree

Opening coding	Subcategories	Main categories	Core Category
Income from multiple businesses	Sources of income	Experience of female fitness creators	Managing visibility
Income only from YouTube			
Earning money from YouTube			
Covid-19 pandemic	Challenge of Covid-19		
Mental health struggle and pressure			
How each social platform is used	Usage of social platforms		
Easier to grow on YouTube			
Active platforms			
Asking fitness questions	Audience engagement	Online fitness community	
Showing appreciation for channel			
Finished the workout or trying it soon			
Asking for a specific type of workout			
Positive impact and experience	Creator engagement		
Engagement strategy			
Doing collaborations with other creators	Fitness creator community		
Experience connecting with other creators			
Position in the community			
Recognition on social platforms			
Practices that can harm your growth	Algorithmic gossip	Navigating the algorithm	
Understanding of YouTube's algorithm			
Video length	Channel practices		
Use eye-catching titles			
Overlay button in video			
Watch time is key metric			
Set schedule of days for publishing			
Publishing a variety of fitness content			
Community Feed			
Focus on research and using keywords			

Video description drives to other social platforms or business sites			
End card to video			
Design of the thumbnail			
Being aware of trends	Creator strategies		
Using other YouTube creators as support			
Use hashtags			
Tagging partners or sponsorships			
Niche your channel			
Hiring or receiving expert help			
Continuously trying to improve			
Consistency			

Appendix G. Fieldnote example

April 30, 2021

- **Bailey Brown**
  - **YouTube:**
    - 349K subs
    - 43.604MM views
    - Two new videos added: 5 minute butt workout and an announcement of her spring 2021 body sculpt program
  - **IG:**
    - 43.4K followers
    - New posts
    - Main feed posts have a change of color pattern
    - Promoting her Spring program
    - Mindfulness posts
  - **IG (app):**
    - 5497 followers
    - Account icon changed to earth tone with palm trees
    - Bio description changed to match Bailey's personal account; promoting new program
  - **TikTok:**
    - One new post
      - Her makeup/glow up routine
  - **Website:**
    - Updated with her new program workouts
  - **Observation:** On YouTube, Bailey typically posts one time per week which is pretty consistent. Her latest video is different than the usual as it is 2 minutes, and the thumbnail uses a different color pattern than previous videos. It can be assumed that she changed it to draw attention as it is an announcement for her new program. The video description drives to her website to follow the program. The video has no end card or click-through elements. Bailey's workout program, BBFIT, is her main focus as she is constantly pushing it to get people to purchase her program. Her channel provides bits of her program, however her objective is to drive business to her program since YouTube is free content. This announcement is for a challenge series which is popular among fitness creators. Her video doesn't seem to have paid views as her view count is generally low, aligning with her subscriber number. On Instagram, her latest posts have been more earth tones shifting from a baby blue color pattern. Her newest posts are promoting her new Spring program. Additionally, her mindful posts include lengthy captions with questions for her followers. As a creator whose job is fitness, her Instagram tends to be focused on mindfulness and relaxation posts. She doesn't post exercises/workouts compared to Sophie. Her latest IG stories are her talking about her program and workouts with a link driving to her website. Her brand BBFIT account also changed to align with her other platforms/accounts with earth tone colors and posts about her new spring program. Website is now updated with her new workouts which can be differentiated by the text color on the thumbnail.

Appendix H. NodeXL Pro Search Interface