A dive into the social media fitness niche: How fitness influencer type relates to customer engagement

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ABSTRACT,

The aim of the thesis is to investigate social media network structures between different types of fitness influencers based on their professional background and following numbers, in regards to customer engagement. The study was conducted to examine the roles they play in the networks they operate in and to provide suggestions for brands wanting to involve influencers as their brand ambassadors. Social media network analysis was conducted for this study. This study found an importance of large following on influence and power within the network, relevance in niches with regards to following numbers, as well as specific benefits that professional athletes, student athletes and pioneer influencers can provide with regards to engagement rates or network patterns. The study improves the understanding of roles of different fitness influencers within social networks and provides suggestions in which areas they can be successfully utilized as brand ambassadors.

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Keywords

Social Network Analysis, social media, influencer marketing, engagement, fitness influencers, digital marketing

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1. INTRODUCTION

The continuous rise of social media in recent years, additionally fueled by emergence of new platforms such as TikTok, has transformed the way we perceive social media influencers. Users can become creators and opinion leaders themselves (Casalo, L. et al., 2020) and amass following numbers comparable to traditional celebrities (Jin, S. et al., 2019). This in turn affects the way consumers interact with content, especially when it comes to influencers acting as brand ambassadors or endorsers (Greenwald, M., 2021). Followers can connect with influencers because of their values, achievements, expertise in a certain topic or showcased lifestyle (Veirman, D et al., 2019; Sokolova, K et al., 2021). That is of major significance for brands. Nowadays, their main task is finding relevant influencers for certain target audiences - as influencers should target a niche market to successfully drive consumer behavior (Chopra et al., 2021). A new challenge lies therefore in deciding whether influencers they work with will be effective in creating a connection with their product (Jimenez-Castilles et al., 2019). With regards to effectiveness, a concept of special importance is engagement, which in the context of this study relates to developing a relationship and connection between an influencer and their followers, and can be showcased by fans liking and interacting with their content (Ruiz-Mafe et al., 2013). It has been proved that influencers being able to generate an impact and increased engagement can successfully increase brand value (Jimenez-Castillo et al., 2019), as engagement determines if the audience perceives the influencers favorably and accepts being influenced by them (Tafesse, W. et al., 2021). In this paper, we will investigate the relationship between influencers and engagement in the niche of fitness

Within the domain of product endorsement, there is a clear distinction between traditional celebrities and social media influencers (Gräve, 2017), which in the context of fitness would be the division between celebrity athletes such as Olympians, and amateur content creators for whom fitness is more of a hobby. Through the pandemic, social media interaction and business models became heavily changed due to increased social media usage. Athletes, both Olympic and students, switched to creating their brand online, changing their focus from strictly sports to other ventures traditionally associated with regular influencers (Su, Y. et al., 2020). Through that process, new types of fitness influencers have emerged, blurring the lines between the old distinctions. Nowadays, fitness influencers promote not only a product, but also a certain lifestyle, creating a plethora of different segments on that basis (Doyle et al., 2020). It is therefore not obvious for brands which fitness influencers are the most appropriate for their product. To make sense of current network dynamics in these segments, brands should be aware of patterns of interactions between fitness influencers to see what social groups they operate in, and what power they hold. To achieve this, this research was carried out using Social Network Analysis (SNA) to investigate social structures and interactions between different types of fitness influencers on Instagram. SNA deals with a set of entities connected in a network. It can be used to analyze social structures, relationships and flows of information between groups, for example organizations or people (Rum, S. et al., 2018). These entities are represented by nodes, while the relationships and connections between them take the appearance of ties or links. When links are connected to nodes, a social network is established (Kane et al., 2013). Visualizing the connections within the network enables distinguishing key influencers, information spreaders, as well as potential social groups and clusters (Himelboim et al., 2019), therefore aiding brands in choosing the best endorser.

This paper attempts to shed some light on the social network structures between different types of fitness influencers in order to identify which influencers engage with their audiences the best, and what the patterns and power structures at play are. Building on that, a part of customer behavior this study focuses on is customer engagement, conceptualized in the form of engagement rates of Instagram posts. In terms of fitness influencer types, the focal point is popularity (number of followers), combined with their professional background (being an athlete, student athlete, trainer or an amateur athlete). Through the means of quantitative and qualitative methods, this paper aims to identify the most engaging and influential fitness influencers. Connections between types of fitness influencers will be characterized and analyzed to establish how the level of engagement differs between them.

The research question this paper aims to answer is: how does popularity and professional background of fitness influencers affect consumer engagement?

In order to address this question, the paper is structured as follows: section 2 discusses the theoretical background of concepts important for this study; section 3 introduces the methodology used to conduct the research; section 4 details the findings. Finally, in section 5 results and implications of the study will be discussed in detail.

2. THEORETICAL BACKGROUND

The purpose of this section is to explore existing literature surrounding use of social media influencers as brand endorsers, current understanding of the notion of fitness influencers, as well as concepts regarding factors affecting effectiveness of social media figures. The aim is to examine the current perception of different types of fitness influencers, and the existing links between professional background and following with regards to customer effectiveness.

2.1 Effects of social media on customer behavior and customer engagement

Previous studies focused heavily on how social media influences customer's decisions and the benefits of incorporating them in business strategies. Social media remains invaluable when it comes to customer journey. In the initial stage of gathering information about a product, social media increases perceived satisfaction during the process (Voramontri & Klieb, 2019). Brands can also choose a more active approach, as by implementing social media in their marketing strategy they can gain control by reaching a wider amount of people and creating their own audience, effectively making the brand more recognizable (Ziyadin et al., 2019). Working with social media influencers provides significant benefits to brands, as studies have shown that inclusion of influencers in brand marketing allows for more authentic and genuine interactions with consumers (Brison et al., 2021).

Customer engagement can be defined as emotional connection between a company and its customers with a focus on interaction and participation of the customer (Farook et al., 2016). Consumers can engage with pages they are a fan of by liking, commenting, and sharing content (Ruiz-Mafe, 2014), and such commitment facilitates a relationship between an entity and its followers. Engagement is also related to dissemination and flow of knowledge within social networks. The relationship can be established not only between existing consumers, but also potential clients and other stakeholders. Regular engagement constitutes brand loyalty and longer customer retention can be achieved by the means of social media (Farook et al., 2016).

2.2 Fitness influencers and emergence of athletes in social media

The growth of the fitness industry has resulted in creation of a niche for social media influencers dedicated to said topic - fitness influencers. As of now, that term encompasses not only the creators dedicated solely to the world of sport - along gym and diet content, the biggest fitness influencers post lifestyle content as well, allowing them to collaborate with brands outside the fitness industry (Szczepański, 2020). Recent studies have started to focus on the phenomena of athletes, both professional as well as amateur (such as student athletes), acting as influencers, showing that they can be successful brand endorsers (Kapitan & Silvera, 2016). They also have multiple incentives and possibilities to build and monetize their brand (Kunkel et al., 2021).

The benefits of media use for athletes include engaging with fans, connecting with other athletes, sponsorship opportunities as well as getting to share other aspects of their life - for sport institutions and professional sport managers, it means developing market strategies, opening dialogue with fans and gauging their sentiment (Abeza et al., 2019). Furthermore, many athletes find it necessary to post on social media to stay relevant (Geurin, 2017). In the research of Andrea Geurin (2017), a female athlete is quoted saying: "I want people to be able to see it's not just my name and times as a runner... that I actually have a life." This proves that athletes would want to use social media as means to build their brand outside their sport, and to build on that, it has been shown that consumers are more likely to engage with content reflecting the athlete's core persona (Doyle et al., 2021). Moreover, social media provides a level-playing field when it comes to gender, popularity of a certain sport, or an institution or a programme that the athlete identifies with. Athletes within the same athletic team have different social media value potential and because of that, they can retain control over said value by creating their own brand (Kunkel et al., 2021; Dosh, 2019). Consequently, studies showed that athletes with stronger brands attract more followers (Su et al., 2020) and value resulting from differing personas allows for more opportunities when implementing athletes into a marketing campaign. Research shows that student athletes are able to garner higher engagement from their followers than traditional influencers (Kunkel et al., 2021). Athletes engage with their audiences in different ways, and therefore present unique advantages in terms of attracting and targeting certain segments. For example, followers might be more interested in an athlete due to their statues, the team they are playing from or due to their innate connection to the athlete (Brison, 2021).

2.3 Theories related to influencer effectiveness

The uses and gratifications theory originated from the field of mass media communications. It explains the drivers and consumer motivations behind their behaviors. One of its basic assumptions is that users are actively involved and interactive within media usage (Luo, 2002). It can help to understand why consumers consume certain content by locating the needs and wants satisfied by interacting with it.

Social presence theory is more useful when analyzing how consumers become influenced. It talks about a notion of people choosing to present select aspects of themselves in different ways to different parts of their audience, for example by highlighting certain aspects, while softening and lessening others. It is done in order to chance and manage perceptions of one's identity (Goffman, 1959). In the context of social media usage, users can manipulate their content as well as their interactions with other users to build their self-presentation. It validates the current idea that content is a deliberate strategy (Hollenbaugh, 2021).

2.4 Factors influencing effectiveness of social media influencers

There has been a multitude of studies dedicated to determining what constitutes an effective use of influencers in marketing. Research has proved that an important component of a successful campaign is the fit between a product and its endorser-influencer: image, personality or expertise of the influencer should match the advertised product. Even if an endorser is popular, if the product advertised is unrelated to their segment, the campaign will not lead to favorable customer behavior. For example, attractiveness of an endorser contributes positively only if the advertised product is related to beauty (Kamins, 1990; Gupta, 1994).

Following that argument is the idea of authenticity and credibility - as campaigns lacking said product-influencer fit can be perceived as such (Chopra et al., 2021). Moreover, credibility increases positive attitude towards customers' purchase intentions and credible influencers can successfully motivate customer's intentions (Gunawan & Huarng, 2015). For example, a certain brand of shoes recommended by a professional dancer resulted in purchase by a respondent in a study by Chopra et al., 2021. It shows that influencers with perceived expertise are deemed as more credible. Previous studies have found that perception of higher credibility is linked to a larger number of followers. Due to that, influencers with a high following have a greater social influence (Djafarova & Rushworth, 2017; Janssen et al., 2021). They were also shown to be better endorsers, as customers trust them more and are able to identify with them more easily. On the other hand, smaller influencers appear to provide the benefits of increased engagement and perceived trustworthiness because of their smaller audience (Maneshwari, 2018). The link between the follower base and being a successful endorser is therefore not entirely clear, however what remains important regardless of the following is the aforementioned match between the product and the influencer (Janssen et al., 2021). Following on the notion of credibility is perceived similarity to the influencer in terms of shared values (Sokolova & Kefi, 2020). Values conveyed by the influencer can be noticed by potential consumers, and the ability to relate to an endorser makes him more influential. Non-traditional types of celebrities - such as vloggers or Instagram influencers - are more influential to young females nowadays (Djafarova & Rushworth, 2017). Consumers were found to identify more, trust more and feel more similar to influencers than traditional celebrities. As influencers can be more easily associated with "normal people", perceived similarity is higher and consumers find that they can believe they could be like them (Schouten et al., 2019). A concept of wishful identification can be introduced here, which is the idea of followers wanting to connect to and be like the person they admire, as it further explains why consumers relate to certain influencers. If followers feel they are similar to the influencers and that their identification is based on "true aspiration rather than only wishful thinking", the more successful they will be when endorsing a product (Schouten et al., 2020). Personal attachment to influencers and existence of para-social interactions (for example interacting with followers) play a big part in identification for Gen-Z users. Being friendly and increasing social attractiveness of influencers increases identification. These factors can help connect to young users and create a para-social relationship and attachment (Sokolova & Kefi, 2020).

Finally, it was shown that the distinction between the influencers is ever-so changing and is not always so clear-cut. Influencers can transform into a traditional celebrity, appearing on talk-shows or runways, while celebrities can successfully act as influencers in social media (Schouten et al., 2019). It further signifies the importance if distincting which type of influencer can be successful endorsers.

2.5 Summary

The theoretical background discusses the current concepts behind the notion of fitness influencers. As this is still a novel topic and the area of research is in its early phases, there is no clear distinction of fitness influencer types as such. What has been investigated were the benefits of using athletes, student athletes and influencers as brand ambassadors, the latter in comparison to traditional celebrities. Multiple studies also explored factors behind influencer effectiveness, introducing concepts such as credibility, relatability, and wishful identification, and in the context of this study the potential link between following and the aforementioned factors was introduced. These interesting concepts brought by the literature review will be further explored in later sections.

3. METHODOLOGY

3.1. Data collection

The data for this study was collected manually from Instagram in June of 2023 through observing Instagram fitness influencers with public profiles, mainly American women. This way, 81 fitness influencers of different backgrounds and following have been identified.

In order to investigate fitness influencers, influencers with a following higher than 1000, public profiles and posting fitness related content were selected. The exception was the category of professional athletes such as Olympic athletes, as they were chosen based on the criteria of a verified profile and a biography mentioning their profession. Biographies of all influencers, as well as their posts were also used to determine their profession. If no mention of being either a professional trainer or a member of a team was found, an influencer would be classified as an amateur athlete - later in this paper they will be simply referred to as amateurs. An influencer would be classified as an athlete if they were practicing sport on a competitive level. Disciplines such as bodybuilding and cheerleading were also classified as sports. Influencers were divided into four categories based on their following: (1) less than 10,000 followers - "low"; (2) between 10,000 and 100,000 - "moderate"; (3) between 100,000 and 1,000,000 - "high"; (4) above 1,000,000 - "large". Furthermore, engagement rate of each influencer was calculated based on the average number of likes and comments from three last posts divided by the number of followers. Based on the calculated rates, influencers were divided into four categories: (1) less than 1% - "low"; (2) between 1% - 3% - "average"; (3) between 3% - 6% - "high"; above 6% - "very high". Only one influencer turned off the possibility to view the amount of likes on every post, and their engagement rate is noted as "x". Determining ties between nodes (influencers) was done based on identifying interactions such as following or mentioning (tagging) in a post. One way ties were noted as well.

3.2 Social network analysis method

The social network analysis was conducted in Gephi by developing a visualization based on the collected data to picture connections between influencers and identified 81 nodes with 664 ties. The metrics used in the analysis were degree centrality by examining the number of ties, as the degree centrality is key to establishing an actor's effectiveness of spreading information to others (Rum, S. et al., 2018). In the context of this research the in-degree metric was given particular attention to determine which influencers are followed the most by other influencers, which would indicate a degree of authority in the network. Moreover, betweenness and closeness centrality was investigated in order to locate influencers in control and with access to network and information flows. Other metrics include eigenvector centrality to identify influencers with access to the most important nodes, as well as modularity to better locate clusters within the network. In addition to these statistical measures, a visual analysis and interpretation of the developed graph was done by color-coding the properties of the nodes. The general visualization includes ties that are not reciprocated, however for more in-depth analysis the network was additionally filtered by the mutual tie metric to identify influencers with an established, mutual connection.

4. RESULTS

4.1 Overview of the visualization

Nodes that are closely interconnected are considered a cluster as they are sharing multiple connections with other nodes in the group. The visualization provides us with a view of a network with two clearly distinguishable clusters. There is a significant degree of separations between them, leading to believe that they are two separate communities, distinct from each other. After closer inspection it could be seen that the smaller cluster at the top consists of athletes and student athletes, while the bottom one includes mainly trainers and amateurs. Graph density returns a value of 0,102, meaning that 10,2% of potential ties in the network exist - which makes the network quite loose, which can be explained by inclusion of influencers from different regions and sport disciplines in the network. Furthermore, most of the connections are probably made online - as influencers can collaborate with each other on a brand project, but they do not know each other from, for example, the same school. Some examples of a few tight clusters or cliques that are formed in the network are student athletes from the same team (same university) and a small group of influencers who collaborated together and are friends in real life.



Fig. 1. Visualization of fitness influencer social network; nodes are color coded by profession

profession	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
amateur	(39,51%)
athlete	(25,93%)
trainer	(22,22%)
studentathlete	(12,35%)

Fig. 2. Legend for profession nodes

Modularity of this network has the value of 0.303, meaning the network has a moderate level of clustered structure. Four communities could be identified, one of them being the top cluster. The rest of the communities are located in the central cluster, however they are still closely interconnected and there are no distinct patterns that could be visually identified.

4.2 Following and engagement rates

There are two communities with both high following and high engagement. The first one is the bottom right part of the bigger cluster, especially nodes on the edge of the cluster, consisting of a mix of powerlifters, as well as trainers and amateurs which tend to be more muscular and focus on high impact workouts. The right part of the top cluster consists of student athletes in the field of cheerleading. It could be therefore inferred that influencers with high following in a specific niche tend to have above average engagement.

All of the nodes connecting the top and bottom clusters together have high or large following. These are called bridging nodes. Such nodes act as connectors between different clusters, and therefore communities, which means they are successful at connecting distinct and disconnected social groups. Within these nodes, the ones with low engagement are well-known influencers that got established a few years ago or were one of the first fitness influencers during the growth of social media. That means they are connected both to the audience of their age, as well as the younger influencers, who at the time possibly grew up as their fans. Finally, most fitness influencers with low following have large engagement rates.

4.2.1 Structural node features

Nodes with a role similar to bridging nodes are nodes with high betweenness centrality, which lie on the shortest path between other nodes. While the role of bridging nodes is mainly to connect different and distant clusters within the network, high betweenness centrality focuses on facilitating flows of information by connecting nodes that are already a part of a large cluster (Kane, G. et al., 2013). These nodes tend to have higher following with average or low engagement. All nodes with high in-degree centrality, meaning that a lot of nodes are connected to them, have a high or large following. Some of these nodes are also the most central nodes in the network, as they are connected to many nodes in different parts of the network, and they have mostly average engagement rate. In terms of closeness centrality degree, a measure identifying nodes with an average shortest path to other nodes, results are inconclusive as most of the nodes display a similar degree of that measure. That means the average distance between nodes is consistent throughout the network. Nodes connected to the most influential nodes, and with a high number of connections were distinguished by looking at the eigen vector centrality and all of them displayed a high or large following.



Fig. 3. Social network with nodes color coded by following number with only mutual ties. Font is color coded by engagement rate. The higher in-degree centrality of nodes, the larger the node.

engagementr	~
average	(4 <mark>1,98</mark> %)
veryhigh	(28,4%)
high	(18,52%)
low	(9,88%)
х	(1,23%)

Fig. 4. Legend for the engagement rate

following	\sim
high	(50,62%)
large	(27,16%)
moderate	(14,81%)
low	(7,41%)

Fig. 5. Legend for the following rate

4.3 Profession and engagement rates

When comparing professional background and engagement, all student athletes in the network have large engagement rates. When it comes to the engagement of athletes, most of them have average engagement. Athletes with higher engagement are mostly in the field of weightlifting and they also have a large following on TikTok.

For both professional trainers and amateurs engagement rates are inconclusive. As most influencers can sell their own programs or give fitness advice without an actual professional background/education and instead just use their personal experience, which does not differentiate them in a significant way for most audiences who pursue fitness just as a hobby. The only professional trainer node with a very high engagement rate in the network is an influencer with a master's degree in medical sciences who provides a scientific perspective to fitness, which could be considered a specific niche. Amateur athletes with high engagement rates tend to also have successful accounts on TikTok with many viral videos, which could translate into higher engagement on Instagram.

4.3.1 Structural node features

A noticeable aspect about nodes with a high betweenness centrality is that they are the previously mentioned pioneer influencers (large following with low engagement rate), the most central nodes (amateur and trainers with average engagement), as well as professional athletes located on the edge of the large cluster. The latter are mostly performing in the field of competitive weightlifting.

Influencers with the highest in-degree centrality, therefore the highest number of connections, tend to be trainers and amateur athletes. They also hold the most central positions in the network, reaching influencers from differing clusters. Influencers with high eigen-vector centrality are mostly amateurs and trainers with average engagement, located in the center of the network, as well as athletes with high betweenness centrality.



Fig. 6. Social network with nodes color coded by profession with only mutual ties. Font is color coded by engagement (Fig.5)

5. DISCUSSION

The main aim of this study was to investigate the relation between different professional backgrounds of influencers and their following on engagement, in the attempt to understand which type of influencer could be the most successful endorser. I analyzed a network of fitness influencers to identify the power structures that could shed light on these effects. Through visualization of the social network and further qualitative analysis, it was revealed there are multiple perspectives one could take into account when finding an influencer for an effective marketing campaign.

5.1 Importance of following number on engagement rates

The study described the positive effect of high following within a specific niche on engagement. In a saturated market of fitness, especially for amateur athletes, it is then beneficial to find a niche related to their aesthetics or area of expertise, especially with a large follower base, as research has shown that high following relates to being perceived as more credible (Janssen et al., 2021). Influencers who leverage that can be seen as experts in their field.

The results in our study also confirm previous findings about greater social influence associated with a high following. Nodes with a high or large following are the most central in the network, reaching different communities within it, and have the highest number of nodes that are connected to them. All the nodes with high betweenness centrality are also exclusively nodes with at least a high following.

The results suggest that newer influencers tend to have higher engagement than more established, older users who have mostly average engagement. Most of the central nodes have a high or large following with an average engagement rate - these are established influencers. They have been active on social media for a few years, and had to maintain engagement with their audiences while continuing to add value to their content. The most central nodes are influencers who have achieved that - for example starting out on Youtube, and later switching to creating content on other platforms to stay current. Due to their large follower base and a high hierarchy and authority within the network they prove very successful when endorsing a product. In correspondence to them are pioneer influencers with low engagement. That rate may result from the change of content to posts that are not interesting to the original audience, posting content that is not popular or trendy anymore, as well as slowed growth of their accounts and losing relevance over time. Due to their low engagement they may not be the best endorsers when looking at conversion rates, however they are able to connect significantly dispersed clusters, and are the most successful at linking different communities together - therefore might prove useful for increasing brand visibility.

Moreover, influencers with low following have shown high engagement rates, which stands in line with the previous findings of smaller influencers being attractive to brands, additionally due to cost-efficiency. They may however lack the connections and authority that larger influencers have.

5.2 Importance of profession on engagement rates

A significant finding in the study is that almost all student athletes have large engagement. The only exception is a student athlete with the largest following in their respective discipline a pioneering influencer that emerged around 10 years ago - with an average engagement. That fits with the finding of pioneering influencers having lower engagement than newly established, up and coming influencers in the previous section. Engagement rates of student athletes found in this research validate previous studies claiming that the audiences of student athletes are more engaged compared to traditional influencers (Kunkel et al., 2021). As these users are a mix between regular influencers and professional athletes they might be perceived as more relatable and credible at the same time - and might be particularly effective with regards to wishful identification. Their audiences can feel truly inspired to become like them, as their success feels more attainable compared to Olympic athletes, and therefore might be more inclined to use the same products and buy from the same brands as them.

As noted before, a high following is especially promising when the influencer is operating within a specific niche, such as a particular sports discipline. One of the disciplines of sport analyzed in the network is competitive cheerleading, which requires a large team - up to 36 athletes. Members of one of the most popular teams in the United States have all high to large following, as well as a very high engagement, which presents many opportunities for companies to find a good fit for their brand. These influencers can not only promote fitness related products, but beauty as well, as athletes often wear makeup or get their hair done for competitions. It is therefore important for companies to keep track of emerging disciplines of sports and track their popularity, as such disciplines can bring in a lot of successful, up and coming influencers and customers devoted to that sport. Athletes in the network have predominantly average engagement, however a noteworthy insight from the study is that athletes within the weightlifting disciplines display a high betweenness centrality. As they weightlift on a competitive level, they can use their expertise in a regular fitness and gym related content, (gym workout routines, mobility and stretching routines) which makes it interesting for audiences of both professional and amateur athletes.

Lastly, the most central nodes in the network are trainers and amateur athletes.

5.3 Limitations and implications for future research

An area for further research could be generational differences between influencers; how older influencers deal with new social media platforms and emerging trends, as well as how their content strategy may change to reflect changes in their lives. Many influencers I researched, such as Olympians or retired student athletes switch their content from the theme of fitness to family and children. A new niche of fitness content, such as postpartum fitness is also an area that could be explored in the future, as the current generation ages and gains interest in this type of content.

Another possible explanation for the results could be the emergence of TikTok. Most nodes with high betweenness or eigenvector centrality were central nodes, established influencers with average engagement. However, the exceptions of a few nodes with large or high engagement were up and coming users who also happened to have a high following on TikTok. By going viral, they can easily access multiple audiences and gain connections with more established figures in the industry. Instagram allows users to post reels (short videos) on their platform, which allows influencers to share their content on these two platforms and reap benefits from short video content form. Influencers who often succeed in that field are younger users, such as student athletes/Gen Z users, as they have a better understanding of current trends and culture which again relates to the possible field of study about age differences within influencers. All in all, an interesting area of study would be exploring the fitness niche on TikTok. Since the data was collected manually, it is guite a small sample size and therefore some important patterns in the network could have been omitted. Because of the sample size, the study included only a few sports disciplines. It could be possible that for other disciplines, engagement rates for student athletes are differing. Furthermore, this study focused on female and English-speaking athletes. Future research could focus on a specific discipline, male influencers, wider geographic region, as well as cultural differences within the industry. This study also did not investigate actual products endorsed by the influencers. Combining the link between types of influencers, engagement and product-influencer fit could be a direction for future research.

Calculation of engagement rates was done manually. In some cases, the number of likes of the most recent posts of an influencer was hidden, and an older post was used to obtain the data, which could result in the engagement rate not being the most accurate.

The analysis of the network was done descriptively and an existence of mediators (factors influencing effectiveness), such as relatability and credibility that have been explored in previous research was not included, therefore it cannot be said with full certainty what factors contributed to high engagement within certain niches. Research exploring perception of these influencers by their audience could have potentially provided a clearer understanding of antecedents of engagement rates.

5.3 Conclusion

Instagram remains an important platform for fitness influencers to connect with their audiences and a home to many different areas of fitness content. It is invaluable for brands to better understand how different types of influencers interact with each other, and what position they occupy in social media networks on the basis of their professional background and follower base. There are different factors that can make an influencer a good endorser - high engagement rates, high hierarchical status or ability to reach different communities within the network which should be acknowledged when evaluating influencers as potential brand ambassadors.

This study has highlighted the potential of student athletes acting as endorsers and provides potential explanations for this phenomenon. Secondly, the importance of identifying niches within social media networks was shown, as it was concluded that large follower bases in specific niches, for example lesserknown or emerging disciplines of sport, yield a high or very high customer engagement rates. While not all influencers with a large following display an above average engagement, it was found that large follower bases are positively related to high social influence within networks. An ability to connect to many different communities in the network was attributed to the following users with high following: pioneer influencers and athletes in the field of weightlifting.

Finally, this paper offers suggestions for future areas of study, as more research is needed to determine with certainty which factors constitute a successful endorser in the area of fitness.

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