

# **Food influencers' impact on buying intention of endorsed foods**

The role of source characteristics, number of followers, credibility, need for conformity, and para-social relationship

February 2020

MSc program: MME  
Specialisation: Consumer Studies  
Thesis code: MCB-80436

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## **Abstract**

With social media having become a big part in our lives, companies are increasingly turning towards social media influencers to promote their brands and products. Research on (micro-)influencer endorsements, specifically food influencers, is scarce and its theoretical foundation is relatively underdeveloped. This research aims to gain insights into how food influencers affect the buying intention of endorsed foods and to develop a theoretical framework that captures how food influencers affect their followers. To the best of the author's knowledge, this study is the first to test the impact of food influencers on the buying intention of their followers by integrating celebrity endorsement theory, number of followers, para-social relationship, and need for conformity. The proposed framework is tested through an online questionnaire, using a non-probability convenience sampling method. Exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modelling (SEM) have been used to test the hypothesised relationships and proposed conceptual framework. Results indicate that social attractiveness and number of followers are the main drivers of source credibility. Source credibility affects para-social relationship and attitude towards endorsed foods, which, in turn, determines the intention to buy these endorsed foods. No evidence of a moderating role of number of followers was found and an insignificant effect of para-social relationship on attitude was observed. Findings provide insight into how food influencers impact the buying intention of endorsed food of their followers. A research model is presented that explains the relationships leading from source characteristics to buying intention, and can be used as input for future research. Results can be utilised by marketers for selecting appropriate food influencers to promote their brands and products.

### ***Keywords***

Food influencers, source characteristics, source credibility, para-social relationship, need for conformity, attitude, buying intention, social media

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# 1. Introduction

With the rise of social media it was just a matter of time before social media platforms would be utilised as a marketing tool (Freberg, Graham, McGaughey, & Freberg, 2011). Recently, influencer marketing, a new form of marketing in which brands and social media influencers collaborate to promote their products, has emerged (De Veirman, Cauberghe, & Hudders, 2017). Taking advantage of an overabundance of social media platforms including Facebook, Instagram, Twitter and Youtube, social media influencers (called influencers hereafter) are increasingly being used to publicise product information and latest promotions to online followers (Lim, Radzol, Cheah, & Wong, 2017; Marvick, 2015). These influencers actively engage in creating User Generated Content (UGC), i.e. generating and publishing multimedia content and giving opinions on tested brands and products to their followers (Sokolova, & Kefi, 2019). By linking the positive image and characteristics of an endorser with the brand, marketers aim to increase purchasing intention of the endorsed product or service (Atkin & Block, 1983).

Influencers are present in many domains including fashion and beauty, health and fitness, and food (e.g. Klassen et al, 2018; Schouten, Janssen, & Verspaget, 2017; Sudha & Sheena, 2017). It is especially interesting to look at the latter domain as the wide variety of social media platforms opens up many opportunities for influencers and marketers to promote food, food related products and restaurants (Kelly, Vandevijvere, Freeman, & Jenkin, 2015; Rutsaert et al., 2013). Despite regulations regarding television fast food advertisements, the average person is still exposed to a dozen fast food advertisements each day, and that excludes the unquantifiable advertisements on social media and product placement (Pirnia, 2019). It is problematic that people are being exposed to fast food everywhere they go as research indicates that this exposure is associated with an increase of fast food consumption, both among children and adults (Andreyeva, Kelly, & Harris, 2011; Harris, Bargh, & Brownell, 2009). Furthermore, Spence, Okajima, Cheok, Petit and Michel (2016) put forward that the regular exposure to virtual foods might be intensifying our physiological hunger, due to the array of neural, physiological, and behavioural responses linked to seeing food. This ties in well with the popular saying among chefs "*You eat with your eyes first*", which seems to suggest that exposure to virtual food influences how people interact with food (Delwiche, 2012). A consequence of the food advertising abundance is that obesity rates have increased enormously, with numbers from the World Health Organization (2018) revealing that worldwide obesity has nearly tripled since 1975. More research is thus required that investigates the impact of food influencers on the consumption behaviour of their followers.

The impact of celebrity marketing communication tools on consumer attitude and behaviour has been extensively researched (e.g. Atkin & Block, 1983; Ohanian, 1990; Till & Busler, 1998). The number of the studies investigating the impact of influencer endorsers on their social media followers, however, is limited. Some research has been conducted towards the effectiveness of influencer endorsements in general (e.g. Kim, Ko, & Kim 2015; Lim, Radzol, Cheah, & Wong, 2017), and in the beauty and fashion domains (e.g. Seiler & Kucza, 2017; Sokolova & Kefi, 2019; Torres, Augusto, & Matos, 2019). To the author's knowledge no research to date has been conducted with the aim of understanding how food influencers affect the food consumption behaviour of their followers and their effectiveness. This is rather surprising given that there are 14 million active social media users in the Netherlands alone (van der Veer, Boekee, & Hoekstra, 2019), and the expected number of mouths to feed is reaching almost 10 billion in 2050 globally (United Nations, 2019). It is important that this topic will be explored, because more than 90 percent of YouTube videos feature food and/or beverage cues and three out of four consumers reportedly rely on social media to make their purchasing decisions (Bennett, 2014; Coates, Hardman, Halford, Christiansen & Boyland, 2019). Also, because messages by influencers are often perceived reliable and compelling to consumers, the likelihood of consumers following their favourite influencers' opinions and recommendations is increased (Talaverna, 2015).

This research aims to fill in the aforementioned gap by examining the impact of food influencers upon consumer buying intention of featured/endorsed foods. Specifically, the objectives of this research are twofold: (1) to explore and examine the underlying mechanisms through which food influencers affect buying intentions of endorsed foods by focusing on the mediating roles of source credibility and para-social relationships; and (2) to develop a conceptual framework that provides a better understanding of how food influencers affect their followers' buying intention of endorsed foods. As multiple sources suggest that more than half of social media users are aged 16-34 (Chaffey, 2019; Greenwood, Perrin, & Duggan, 2016; Perrin, 2015), the focus lies on how this age group's behaviour is affected by food influencers. The main question that this research shall address can be formulated as follows:

*“How do food influencers impact consumers' buying intention of endorsed/featured food products?”*

To make the question more digestible, it is split up in a four sub-questions:

- (1) What is the impact of source characteristics and number of followers on food influencers' perceived source credibility?
- (2) How, if at all, does the need for conformity affect consumers' attitude towards endorsed foods?
- (3) What is the impact of source credibility in the formation of attitudes and buying intention towards endorsed foods?
- (4) What is the role of para-social relationship between food influencers and their followers?

Investigating the impact of food influencers on the consumption attitude and intention of their followers is highly relevant as food influencers have amassed millions of followers on various social media platforms (Barker, 2019). The research findings can be a starting point for future research exploring the relationship between humans, food, and social media. The findings also have marketing implications as they can be used by marketers and governments to promote healthy and sustainable food consumption. Food influencers might be the key to promoting healthy and/or sustainable food consumption, and countering obesity that governments have been searching for.

The structure of the remainder of this thesis is as follows. Chapter two presents the theoretical background related to (online) celebrities, celebrity endorsement literature, the role of social influence and need for conformity, and para-social interaction theory. Chapter three presents a conceptual framework and the hypotheses in the build up to the framework. The fourth chapter describes the used methodology: questionnaire design and administration, as well as statistical procedure. The results of the analyses can be found in chapter five. Chapter six features a discussion of the results and presents implications, limitations as well as some future avenues to which this study opens the paths. Chapter seven ends this research by giving some concluding remarks.

## 2. Theoretical background

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In this chapter relevant theories and concepts are explained that are used as input for the conceptual framework presented in chapter 3. First, the distinction between traditional celebrities, influencers, and micro-celebrities will be clarified. Then, a brief overview of the main celebrity endorsement models will be given. As opinions and decisions are likely to be influenced by external sources and the degree to which people are susceptible to interpersonal influence differs among people, social influence and need for conformity shall also be discussed. This chapter closes with a short section about para-social interaction theory.

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### 2.1 Celebrities, influencers, and micro-celebrities

Companies design and use marketing strategies that help them achieve competitive advantage over their competitors in an attempt to create positive effects in the minds of consumers. In helping achieve this, *celebrity* endorsers have been used since the late 1800s as part of a company's marketing strategy (Erdogan, 1999). A well-known example is George Clooney as Nespresso endorser saying his famous sentence "*Nespresso. What else?*" (Matzler, Bailom, von den Eichen, & Kohler, 2013). Large amounts of money are invested in celebrity endorsers as they are considered influential with appealing and likeable qualities (Atkin & Block, 1983) and companies plan that these qualities are transferred to products or services via marketing communication activities (Kapitan, & Silvera, 2016; McCracken 1989). Furthermore, due to their fame, celebrities serve not only to create and maintain attention, but also to enhance message recall (Erdogan, 1999; Friedman & Friedman, 1979) and to create a positive attitude towards the brand (Kamins, Brand, Hoeke, & Moe, 1989) to ultimately increase the likelihood of a consumer choosing the endorsed brand (Agrawal & Kamakura, 1995).

Now that advertising agencies are allocating larger shares of their budgets to social media, the advertising industry is in search of effective strategies to get the highest return on investment (Woods, 2016). One of these strategies in recent years has been influencer marketing. Instead of using "traditional" celebrities such as actors, models, and athletes, companies increasingly collaborate with influencers (e.g. vloggers and 'Instafamous' personalities) to add value to their brand (Marwick, 2015; Schouten et al., 2017). As the name suggests, an *influencer* has a lot of power on social media. They are often seen as leaders that influence the decisions of their followers, are loved by brands, and trusted by consumers. They are experts in one or several categories like beauty, fitness, food and fashion and bring great potential to social media because of their credibility and their faithful community of followers (Schouten et al., 2017). Through sharing self-generated content these influencers have gained a large follower base and they can cause the opinions of their followers to change when they speak on a certain topic (Mena, 2017).

The growth of social media coupled with the rise of individualism has given rise to the notion of self-branding, a form of branding in which an individual aims to develop a distinctive public image for commercial gain and/or cultural capital (Khamis, Ang, & Welling, 2017). The newest generation of "ordinary people" who are popular on social media and blogs, so called *micro-celebrities*, originate from this concept of self-branding. According to Marwick and boyd (2011), "a micro-celebrity can be understood as a mindset and set of practices in which audience is viewed as a fan base; popularity is maintained through ongoing fan management; and self-presentation is carefully constructed to be consumed by others" (p. 140). Micro-celebrities are mostly active on Instagram, although they also exist on other social media platforms including YouTube and Twitter (Djafarova & Rushworth, 2017). They have become relevant sharing their passions on their profiles, creating a community that has the same interests as they have. Rather than the size of the audience, it is about how engaged they are (Wissman, 2018). These micro-celebrities have specific

niche audiences that are loyal to them and tend to share similar preferences, which makes them highly attractive to brands when the brand needs to segment the audiences in their campaigns (Mena, 2017).

One thing that celebrities, influencers and micro-celebrities have in common is trust. It is one of the most important values that they offer brands, and it is a necessary and vital component for any brand that wants to earn the trust of their consumers (Mena, 2017). This research shall only focus on influencers as this the most relevant group of the three for two reasons. The effect of celebrity endorsers on consumers has been widely researched and results indicate that influencers are more powerful than traditional celebrities when it comes to affecting consumer buying behaviour (Djafarova & Rushworth, 2017; Schouten et al., 2017). Secondly, the impact of micro-celebrities is relatively small due to their limited follower base. The definition of an influencer that shall be used throughout this paper is “a person who has built a reputation for his/her knowledge and expertise on a particular topic, and who regularly posts about that topic on social media to generate a large engaged follower base that pays close attention to their views” (De Veirman et al., 2017; Schouten et al., 2017).

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## 2.2 Overview of celebrity endorsement literature

McCracken (1989, p. 310) defined a celebrity endorser as: “... any individual who enjoys public recognition and who uses this on behalf of a consumer good by appearing with it in an advertisement.” Throughout the literature, four key models have emerged in relation to celebrity endorsements:

- The source credibility model (Hovland & Weiss, 1951);
- The source attractiveness model (McGuire, 1985);
- Product match-up hypothesis (Kamins, 1990);
- Meaning transfer model (MTM) (McCracken, 1989).

According to the *source credibility model* the effectiveness of a message depends on two factors: trustworthiness and expertise (Hovland & Weiss, 1951). *Trustworthiness* is defined as the endorser’s honesty, integrity and believability and is dependent on the perceptions of the target audience (Erdogan, 1999). Evaluating an endorser’s trustworthiness might be difficult as it requires a substantial amount of information about the person and can be acquired and reinforced through repeated communication and interaction (Chung & Cho, 2017). Tripp, Jensen, and Carlson (1994) suggest that an endorser is seen as more trustworthy when only endorsing one brand. *Expertise* refers to relevant knowledge, experience, and skills an endorser possesses with regard to the subject matter of an endorsement (Chung & Cho, 2017). Important to note is that it only matters how the target audience perceives the endorser, not whether or not the endorser truly is an expert (Ohanian, 1991).

Source credibility refers to the extent to which an endorser is perceived knowledgeable and honest and from whom the consumer can gain expertise in terms of product knowledge (Djafarova & Rushworth, 2017; Ohanian, 1990). It is an important driver of an advertisement’s effectiveness as several researchers indicate that information from credible sources is perceived more valid and is more persuasive than other information, which consequently positively influences beliefs, opinions, attitudes, and/or behaviours (Chung & Cho, 2017; Erdogan, 1999). The process that induces this is called “internalisation”, and occurs when a consumer views an endorser’s advertising claims as his/her own. This process has marketing implications because once internalisation occurs, the consumer’s adopted attitude tends to be sustained. This is true for when the endorser switches to a different position, the endorser is replaced, and even when the source of a particular claim is forgotten (Chung & Cho, 2017).

The *source attractiveness model* contends that the effectiveness of a message depends on similarity, familiarity and liking for an endorser (McGuire, 1985). *Similarity* is defined as the resemblance

between the source and the receiver of the message, *familiarity* as knowledge of the source through exposure, and *likability* as affection for the source as a result of the source's physical appearance and behaviour (Erdogan, 1999). Although these three components are acknowledged by McGuire, it is noteworthy that most studies have only investigated the effect of physically attractive endorsers on consumer attitudes rather than investigating celebrity familiarity or similarity (Roy, 2018). The similarity and familiarity components of an endorser's attractiveness shall be discussed in a next section about para-social interaction theory. The source's attractiveness consists of two components: physical attractiveness and social attractiveness. Physical attractiveness refers to the physical appearance of an influencer. Social attractiveness, or likability, can be referred to as a person's tendency to be attracted by the communicator's charisma or the degree of friendliness/approachability of the communicator in the eyes of the beholder (Xiao, Wang, & Chan-Olmsted, 2018), and occurs from affection for the source due to their appearance, behaviour or other personal characteristics (Byrne, Whitehead, & Breen, 2003).

The *product match-up hypothesis* suggests that endorsements are more effective when there is a match-up between highly accessible celebrity associations and highly accessible brand/product associations (Kamins, 1990; Misra & Beatty, 1990). According to McCracken (1989) some celebrity/product endorsements work better than others due to an inherent match or congruency between the endorser and the product and is vital to achieve excellent results (Lim et al., 2017). However, to measure celebrity/product match-up, research has included various source credibility dimensions, such as physical attractiveness (Kamins & Gupta, 1994; Liu, Huang, & Minghua, 2007) and expertise (Till & Busler, 1998, 2000). In most cases, a product match-up was found to result in the formation of favourable consumer attitudes and purchasing intentions.

The source credibility model, source attractiveness model and product match-up hypothesis have all been critiqued for failing to explain important factors about celebrity endorsements (DeSarbo & Harshman, 1985; McCracken, 1989). According to McCracken (1989), the source models lacked validity because they only developed affirmation about credibility and attractiveness of the celebrity. Furthermore, he believed that the source models failed to explain the reasons why a celebrity was effective for one product but ineffective for some other. He proposed that celebrities stand for a set of meanings and that they offer a range of personality traits and lifestyle patterns to the consumer that the source models excluded. The Match-up Hypothesis has also been criticised; mainly for its limited real world applicability. Erdogan (1999) postulates that this is caused by the model's inability to identify and measure valid product dimensions, making it almost impossible to develop the needed match-up between a product and a celebrity.

The lack of explanatory power of the three aforementioned models lead to the introduction of McCracken's *meaning transfer model* (MTM) (1989). This model explains a three-stage meaning transfer process. In the first stage, meanings related to a celebrity are developed from the roles, campaigns, traits or accomplishments of him/her. Then, in the next stage the celebrity is assumed to transfer the meanings to the products by virtue of the endorsement. In the last stage, meanings from the product are transferred to the consumer through purchase and consumption (Jain & Roy, 2015).

Together, these four models identify the main characteristics that are essential for creating effective celebrity and/or influencer endorsements, and are used as a backbone for the suggested conceptual framework presented in section 3.

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### 2.3 Social influence and need for conformity

The importance of social influence has been recognised throughout consumer research (e.g. Bearden, Netemeyer, & Teel, 1989; Deutsch & Gerard, 1955). *Social influence* is a process that affects an individual's attitudes, opinions and behaviour to meet the demands of a social environment (Friedkin & Johnsen, 1990), and comprises of social norms, conformity, and compliance (Cialdini & Trost, 1998). *Social norms* have been formulated in numerous ways but can be described as commonly accepted and unwritten rules and standards that are understood by members of a group, and that guide and/or constrain social behaviour without the force of laws (Cialdini & Trost, 1998). *Conformity* can be referred to as the act of changing one's behaviour in response to real (involving physical presence of others) or imagined (involving pressure of expectations) pressure (Cialdini & Trost, 1998). *Compliance* is similar to conformity, but is a particular kind of response to a particular kind of request (Cialdini & Trost, 1998). The request may be implicit or explicit, but in all cases the target recognises that (s)he is being urged to respond in a desired way. Cialdini and Trost (1998) acknowledge three goals that these components can serve: to behave effectively (accuracy), to build and maintain relationships (affiliation), and to manage self-concept. Which goal is most salient depends on the individual as well as the situational context.

Individuals who communicate and interact with each other on social media carry considerable influence within these platforms, such as forming consumer's beliefs and behavioural intention to continue using social media (Chang, Hung, Cheng, & Wu, 2015; Weeks, Ardèvol-Abreu, & de Zúñiga, 2017), and affecting purchase behaviours (Kwahk & Kim, 2017). Moreover, peer communication positively influences purchase intentions directly through conformity and indirectly by reinforcing product involvement (Wang, Yu, & Wei, 2012). Susarla, Oh, and Tan (2012) find evidence that social influence is transmitted via multiple mechanisms, including a preference for conformity and homophily, and the role of social networks in guiding the formation of opinions. In line with these findings, there are experimental results that have verified the existence of conformity in social networks (Tang, Wu, & Sun, 2013). Hence, prior research contends that social influence plays a major role in the shaping of attitudes, intentions and behaviour on social media.

The degree to which an individual is susceptible to interpersonal influence is a trait that differs varies from person to person and can be described as:

*The need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others (Bearden et al., 1989, p. 474).*

This need for conformity consists of two types of interpersonal influence that Deutsch and Gerard (1955) acknowledged as normative- and informational influence. Normative influence is defined as the tendency to conform with the positive expectations of others, whereas informational influence refers to the tendency to accept information obtained from others as evidence about reality (Deutsch & Gerard, 1955). Because the need for conformity differs across individuals, it is assumed that it will have a different impact on someone's attitude.

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### 2.4 Para-social interaction theory

*Para-social interaction* (PSI) originates from the communications literature and refers to the interaction between users of mass media and media figures, such as a tv character or newsreader (Horton & Wohl, 1956). This interaction can lead to a so called *para-social relationship*, to which the user responds to the media figure as if (s)he was a personal acquaintance or friend (Giles, 2002). Para-social relationships are not restricted to mass media as it can also arise from messages in an online environment (i.e. social media) that are designed to bring the viewer closer to a mediated persona, such as a brand or influencer (Labrecque, 2014). The formation of a para-social

relationship between influencers and their audience is essential for the effectiveness of influencer marketing (Balaban & Mustatea, 2019).

When it comes to the development of para-social relationships the literature reports divergent views. According to Labrecque (2014), feelings of PSI are developed through carefully constructed verbal and nonverbal interaction cues, and can carry over to subsequent encounters. Perse and Rubin (1989) suggest that the length of the relationship is not directly linked to PSI, and that feelings of PSI can arise during initial exposures. Others report that continued interactions should lead to enduring relationships and might strengthen these feelings (Hartmann & Goldhoorn, 2011). Auter (1992) posits that the behaviour of a persona during each interaction event helps in the formation of an opinion about that character, which is then carried into the next para-social encounter. With regards to social media, para-social relationships can be created if a social media user subscribes to their channels or blogs and starts following their posts published on social media (Chen, 2016).

Unlike traditional mass media, the relationship between an influencer and follower is not unidirectional. Followers can write comments and send messages, and the content owner has the possibility to reply to these messages and comments. However, due to their large follower base, influencers are similar to celebrities in the sense that they are unable to meet all of their followers' requests and engage in elaborate discussions. Audiences often identify with and know the influencer well (familiarity), whereas the influencer has little knowledge about the former. This can possibly contribute to the illusionary relationship between influencer and follower, hence strengthening the Para-social relationship (Sokolova & Kefi, 2019). All things considered, PSI theory is worth exploring further as social media interactions have the potential to create a sense of intimacy, feelings of connectedness, perceived friendship and understanding, and identification with influencers that can ultimately foster para-social relationships (Chung & Cho, 2017).

### 3. Hypotheses and conceptual framework

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In this chapter hypotheses based on the literature background are formulated. Thereafter, the resulting conceptual framework is presented.

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#### 3.1 Source characteristics (physical attractiveness, social attractiveness, product match-up)

Although physical attractiveness might be a characteristic that is more salient for endorsers active in the beauty and fashion domains, it is also relevant for endorsers in the food domain. If a viewer is not physically attracted to a food influencer in the first place, this viewer is not likely to keep watching this influencer. Literature regarding the relation between source attractiveness and celebrity endorsements effectiveness is consistent. Numerous studies have discovered a positive correlation between physically attractive celebrities and consumer attitude as well as purchase intention (e.g. Erdogan, 1999; Kamins, 1990; Ohanian, 1991; Sokolova & Kefi, 2019; Till & Busler, 1998). A study by Kim and Na (2007) indicated that attractiveness is important for the effectiveness of an endorsement, especially when the fit between the endorser and the endorsed product is incongruent. Chaiken (1979) found that when using the same arguments in a message, the attractive speaker is more likely to influence the audience than less appealing ones. Additionally, Seiler and Kucza (2017) demonstrated that there is a direct positive link between source attractiveness and credibility in a study among different types of testimonials. Similarly, Kamins (1990) compared the impact of attractive and unattractive celebrity endorsers, and came to the conclusion that an attractive celebrity was perceived more credible than a less attractive celebrity endorsing the same product. In line with these findings the following hypotheses about physical attractiveness are formulated:

*H1a: Physical attractiveness has a positive relationship with trustworthiness.*

*H1b: Physical attractiveness has a positive relationship with expertise.*

Research regarding the social component of source attractiveness is limited compared to the physical component. Some quantitative data is available that shows a positive correlation between likeability and credibility of political candidates (Teven, 2008). Likewise, Brodsky, Neal, Cramer, and Ziemke (2009) found that highly likeable eyewitnesses were rated higher on credibility than their less likeable counterparts. Additionally, Mahao and Dlodlo (2017) investigated an athlete-celebrity endorsed product and came to the conclusion that source likeability was the most important source attribute that influenced credibility evaluations. As it is assumed that source credibility is composed of trustworthiness and expertise, the following hypotheses can be postulated:

*H2a: Social attractiveness has a positive relationship with trustworthiness.*

*H2b: Social attractiveness has a positive relationship with expertise.*

Numerous studies found empirical support that congruence between the message and the style of the influencer can significantly enhance consumer attitude and purchase intention (Lim et al., 2017; Pöyry, Pelkonen, Naumanen, & Laaksonen, 2019; Torres, Augusto, & Matos, 2019). Breves, Liebers, Abt, and Kunze (2019) found that the influencer's credibility was significantly affected by the influencer-brand fit. Moreover, endorsers that advertise products that do not fit their expertise, i.e. a bad product match-up, are perceived less credible (Lee & Koo, 2015). This particularly holds for influencers as they are likely to be criticised when they endorse products that do not match their specific specialisations and may only be perceived as credible information sources in endorsements

that match their domain of interests (Schouten et al., 2017). A good product match-up is likely to increase the endorser's perceived credibility. From the above follows that:

*H3a: Product match-up has a positive relationship with trustworthiness.*

*H3a: Product match-up has a positive relationship with expertise.*

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### **3.2 Endorser's number of followers**

A limited number of studies have examined the effect of an influencer's number of followers on its followers. De Veirman et al. (2017) found a direct effect of the number of followers on influencer likeability. In a study among millennials, Chatzigeorgiou (2017) found that the influencer's number of followers is positively linked to the trust in influencer marketing. Celebrities with a higher number of followers on Twitter were considered more credible than those with a lower number of followers (Jin & Phua, 2014). Similarly, Benedic and Granjon (2017) found that social media influencers with a larger amount of followers are perceived more trustworthy and competent than those with a smaller amount of followers. Two respondents in their study mentioned that when an influencer has a large audience, it means they are trustworthy because they worked hard to grow their audience and would not have achieved that if it wasn't for their competence. It is thus hypothesised that:

*H4a: The number of followers has a positive relationship with trustworthiness.*

*H4b: The number of followers has a positive relationship with expertise.*

Despite the fact that the aforementioned studies all report a direct effect of the number of followers on credibility, it can be argued that the extent to which the source characteristics (physical- and social attractiveness, and product match-up) are a reliable predictor of source credibility is dependent on the influencer's number of followers. Specifically, it is assumed that the number of followers is a moderator between the source characteristics and source credibility that has the capability of strengthening the positive relationship between the two constructs. A follower might already consider a food influencer both socially and physically attractive, but if this influencer has a large (perceived) follower base this follower's credibility judgements can be adjusted upwards. At the same time, if this influencer was to have a small follower base a follower's credibility judgements can be adjusted downwards. Hence, it is proposed that the effect of source characteristics on source credibility will be more pronounced for food influencers with larger numbers of followers. Therefore, the following hypothesis is formulated:

*H4c: The number of followers that an influencer has is a moderator that strengthens the relationship between the source characteristics and source credibility.*

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### **3.3 Source credibility (trustworthiness and expertise)**

Previous studies found that perceived expert sources are more persuasive (Aaker & Myers, 1987) and increase purchasing intentions (Ohanian, 1991). According to Djafarova and Trofimenko (2019), the perceived credibility of an endorser's communications has a positive influence on consumers' brand attitudes. In specific, they found that micro-celebrity endorsements were more effective when the micro-celebrity was responsive to their followers and competent in the use of the product. Seiler and Kucza (2017) found that credibility positively affects attitude towards the ad and brand. A review study by Pornpitakpan (2004) on the effect of credibility of the message source on persuasion over a span of five decades showed that higher source credibility resulted in more persuasion in terms of both attitude and behavioural measures. Additionally, a source high in expertise, compared to one low in expertise, appears to lead to positive attitudes towards the endorser and advertisement (Braunsberger, 1996). With regards to studies in the food domain

results are inconsistent. Villani, Egan Keogh, and Clifton (2015) found that, despite being considered experts in their domain, celebrity chefs are not assumed to be qualified to provide dietary or nutrition advice to the general public. This may be explained by excessive amounts of unhealthy fat, sugar, or salt that are being used in their recipes. Barnes' results (2017), on the other hand, reveal that consumers use the information provided by celebrity chefs such as Jamie Oliver and that it can change their attitude towards food, cooking and shopping for food. Because Pornpitakpan (2004) addressed that the trustworthiness and expertise components of source credibility might not weigh equally in affecting attitude formation and change, the effects will be tested separately resulting in the following hypotheses:

*H5a: Trustworthiness has a positive relationship with attitude towards the endorsed food product.*

*H5b: Expertise has a positive relationship with attitude towards the endorsed food product.*

Rather than only affecting consumer attitude directly, source credibility is also assumed to affect attitude indirectly via para-social relationship. Various studies have found that a source's perceived credibility is essential for persuading consumers to form para-social relationships (Kim, Ko, & Kim, 2015; Rubin & Perse, 1987). Results from Xiang, Zheng, Lee, and Zhao (2016) indicate that expertise, similarity and likeability all have a positive influence on the formation of para-social relationships. Similarly, findings from Lou and Kim (2019) reveal that influencer credibility, especially trustworthiness, attractiveness and similarity, are positively related to the formation of para-social relationship between influencers and their followers. Additionally, Yuan, Kim, and Kim (2016) conducted an experiment that showed that source credibility directly fostered the formation of para-social relationships. From these studies follows that the more a viewer trusts an influencer and assumes this influencer to be an expert, the stronger the para-social relationship with this influencer will be. In other words, higher source credibility leads to stronger formation of a para-social relationship between the follower and influencer. Hence, the following hypotheses are formulated:

*H6a: Trustworthiness has a positive relationship with the para-social relationship.*

*H6b: Expertise has a positive relationship with the para-social relationship.*

---

### **3.4 Para-social relationship**

The literature acknowledges the existence of para-social relationships between a source and its audience. Rasmussen (2018), for instance, showed that feelings of knowing the speaker and feelings as though the speaker was a friend revealed the occurrence of a para-social relationship between viewer and YouTube celebrity. Chung and Cho (2017) provide empirical evidence that consumers' para-social relationships with celebrities through social media have a positive impact on celebrity endorsement. Specifically, they found a significant direct link between para-social relationship and source trustworthiness. Sokolova and Kefi (2019) found that para-social relationship functions as a mediator between attractiveness and purchase intention. According to Hwang and Zhang (2018), para-social relationship has a significant positive influence on followers' purchase intention. Some other studies propose that when consumers form a para-social relationship with a (social) media character, they tend to align their attitudes toward consumption to coincide with attitude that this (social) media character endorses (Knoll, Schramm, Schallhorn, & Wyrnistorf, 2015; Yuan et al., 2016). Hence, different studies propose different positions for para-social relationship in the relationship between influencer and viewer behaviour. This research posits that in order for a para-social relationship to occur, the viewer must have had at least made a judgement about the influencer's credibility, i.e. trustworthiness and expertise. From this follows that a para-social relationship should be positioned after source credibility and before attitude; aligning with results of Knoll et al. (2015) and Yuan et al. (2016). It is thus hypothesised that para-social relationship mediates the relationship between source credibility and attitude:

*H7: Para-social relationship has a positive relationship with attitude towards the endorsed food product.*

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### **3.5 Need for conformity**

A small number of studies exists that have examined the relationship between need for conformity and its impact on the formation of attitudes. There is however evidence of conformity behaviour as people have been shown to adjust their attitudes to conform to those around them (Levitan & Verhulst, 2016). There is also empirical support suggesting that large numbers of people who express a similar opinion about something or someone online, strongly influence the formation of one's opinions (Sundar, 2008). Additionally, Yim, Sauer, Williams, Lee, and Macrury (2014) found a link between attitude towards luxury brands and the degree to which one is influenced by others, i.e. need for conformity. As individuals' need for conformity and the opinions that individuals are exposed to and influenced by vary across people, it will affect people's attitudes differently as well. If someone is influenced by a friend who has a negative opinion and attitude towards something this is likely to negatively influence the attitude of this person, whereas it would have the opposite effect had the friend been positive about the product. The reason why need for conformity is hypothesised to influence the attitude (rather than source credibility) can be explained as follows. Whenever a person talks with a friend about an endorsed food product featured in a social media post this person is likely to directly and implicitly make a judgement about this product as a consequence of this friend's opinion about this food product. In other words, it is assumed that a person conforming to the opinion of a friend takes a cognitive shortcut, which leads this person to directly form an attitude towards a food product rather than for instance the trustworthiness or expertise of the influencer that posted about this food product. It is thus hypothesised that need for conformity affects one's attitude:

*H8: Need for conformity has a positive relationship with attitude towards endorsed food product.*

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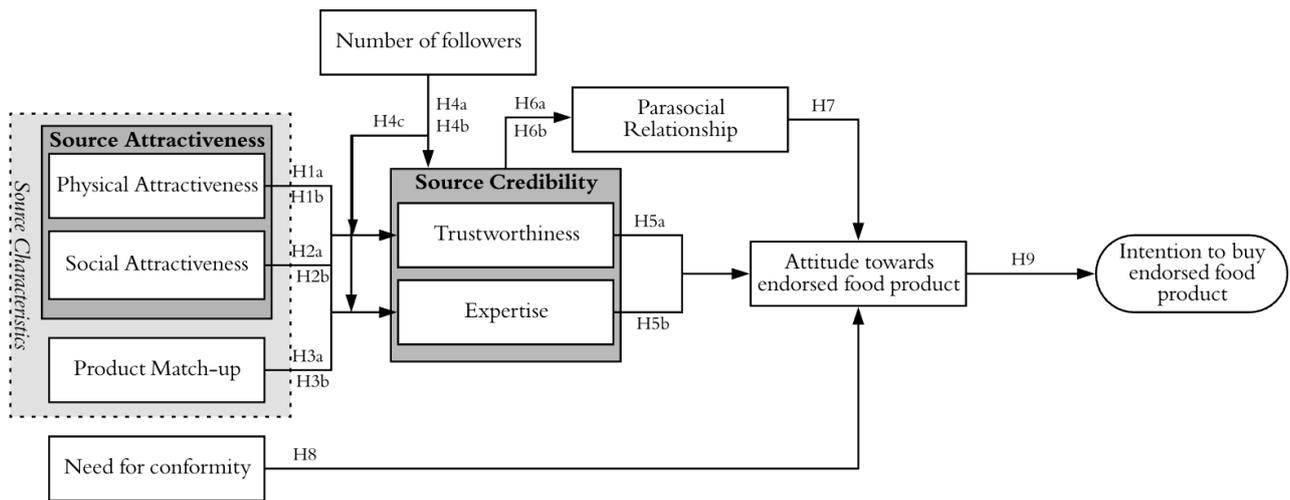
### **3.6 Attitude towards endorsed food product**

Findings of multiple studies reveal a positive relationship between attitude and purchase intention (e.g. Arora, Prashar, Parsad, & Tata, 2019; Lim et al., 2017). Additionally, Pradhan, Duraipandian, and Sethi (2016) put forth that a favourable attitude towards a specific product is a dominant predictor of consumers' purchase intention. In a study among children, researchers discovered that favourable attitudes towards specific food items lead to higher intentions to consume those foods (Dixon, Scully, Wakefield, White, & Crawford, 2007). Similarly, it can be assumed that a favourable attitude towards a food product endorsed by a food influencer will result in higher purchase intention of that specific food product. Hence, the following relationship is hypothesised:

*H9: Attitude towards endorsed food product has a positive relationship with intention to buy the endorsed food product.*

### 3.7 Conceptual framework

The conceptual framework below presents an overview of this chapter's formulated hypotheses.



**Figure 1.** Conceptual framework.

## 4. Methodology

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This chapter describes the implemented research method to test the research questions. First, the questionnaire design, as well as the procedure and participants will be discussed. Next, the questionnaire's measurements and data analysis procedure are explained.

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### 4.1 Design, procedure, and participants

In order to test the proposed conceptual framework an online questionnaire was distributed to the author's social network and through snowball sampling. Prior to launch, the questionnaire was pre-tested on a sample of five volunteers to track any inconsistencies that might exist. Based on the feedback from the pre-test, some modifications were made to improve the questions' readability and the flow of the questionnaire. The online questionnaire is implemented with online survey software Qualtrics. At the start of the questionnaire respondents were given a definition of a food influencer as well as some real life examples to avoid any ambiguities. For respondents that indicated to not follow any food influencer the questionnaire immediately stopped as they are not part of the study's target group. In total, participants were presented three open questions and 53 items which they had to rate on a 7-point Likert scale where 1 and 7 represented "strongly disagree" and "strongly agree" respectively. Additionally, four general questions about social media usage and demographics of the participants were asked at the end of the questionnaire. The reason for placing these items at the end of the questionnaire was to avoid fatigue. Only people between 16-34 years were considered appropriate for data collection as people in this age range are the most heavy and frequent users of social media (Chaffey, 2019; Greenwood et al., 2016). All responses were administered between the second half of December 2019 and the first half of January 2020.

After data screening 83 responses were deleted, because these respondents indicated that they did not follow any food influencer. Qualtrics recorded these responses as fully completed, but these respondents never got to see any questions as they were immediately directed towards the end of the questionnaire. Additionally, two erroneously filled questionnaires were removed from the dataset because two respondents had filled in the same answer on all questions, indicating that these respondents were clearly not engaged when filling in the questionnaire. In the end the 141 remaining responses were used for data analysis. Male respondents constituted 33.3% (n = 47) of the sample, and more than half of the respondents (n = 75) were in the age-group of 21-25 years. In terms of education level, the majority of the respondents are highly educated, as 92.2% (n = 130) is in the possession of an academic Bachelor's degree. Overall, respondents were heavy social media users; 61.0% (n = 86) of the sample reported using social media for at least two hours on a daily basis, and only 9.2% (n = 13) reported a social media activity less than one hour per day. A substantial fraction of the sample, 73.0% (n = 103), also indicated to use social media at least once a week for finding inspiration about food and/or recipes. A detailed table of the sample's demographics and data about the general questions can be found in appendix 1.

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### 4.2 Measurements

Most of the questionnaire is designed based on validated scales from prior research in marketing and communications. Physical attractiveness and source credibility (trustworthiness and expertise) were measured using the scale from Ohanian (1990). Social attractiveness was measured with four items from Reysen's (2005) scale. The scale of Schmidt and Hitchon (1999) was adopted to assess product match-up. The number of followers consisted of three questions asking how many followers an influencer must have for that participant to consider him/her having a large follower base, how many followers the selected food influencer has, and to what extent the participant

considered the selected food influencer to have a large follower base. Para-social relationship was measured using an adapted combination of nine items that Chung and Cho (2017), and Rubin and Perse (1987) have used. Attitude towards the endorsed food product was assessed with the scale that Spears and Singh (2004) and Schouten et al. (2017) used. Purchase intention was measured using a scale similar to the one used by Sokolova and Kefi (2019), although some items were slightly changed. Lastly, to assess need for conformity the scale from Bearden et al. (1989) was implemented. All items were transformed into statements, and data were collected using a seven-point Likert's scale, where 1 and 7 represented "strongly disagree" and "strongly agree", respectively. The same instrument was used to test the proposed hypothesised model for endorsed food products by food influencers.

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### 4.3 Analyses

The data were collected and gathered in a .sav file and were analysed using IBM SPSS Statistics 25 and IBM AMOS 26. SPSS was used to perform exploratory factor analysis (EFA) as well as tests for reliability and frequencies. AMOS was used to perform confirmatory factor analysis (CFA) and to process the data by implementing structural equation modelling (SEM). There were no missing data as the questionnaire was designed to obtain compulsory responses from respondents. After data screening and prior to the data analysis, variable screening was performed to assess the items' skewness and kurtosis. The results showed that the data were not multivariate normally distributed. When employing 7-point Likert scales, as was done in this research, it is not uncommon to have data that are non-normally distributed (Leung, 2011). Hence, in the subsequent SEM analyses, a maximum likelihood parameter estimator (ML) and chi-square test statistics were employed, which are both robust to non-normality.

Two items had a kurtosis larger than 3 indicating the presence of outliers. The items were kept in the dataset as it could not be said with certainty that any of the respondents had made a mistake when selecting their answer. Next, EFA was carried out to identify the structure of the relationship between the variables and the respondents. However, before proceeding with EFA, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were checked to find out whether data was suitable for factor analysis and to test the hypothesis that the correlation matrix is an identity matrix. KMO amounted 0.838 and for Bartlett's test of sphericity  $p < 0.001$ , indicating that the data was suitable for factor analysis and that there may be statistically significant interrelationships between variables in the model. As suggested by Fabrigar, Wegener, MacCallum, and Strahan (1999) principal axis factoring was selected as extraction method as the data was not perfectly multivariate normally distributed. An oblique rotation was selected because the latent variables measured by the questionnaire's items are likely to be correlated to each other. Promax rotation was used rather than direct oblim, as the latter is a computationally intensive method and has diminished interpretability.

To determine the factor structure and to investigate whether the factor structure could be replicated with the dataset of 141 respondents, CFA was carried out. A number of model fit indices and their criteria were used to examine the fitness of the proposed model with the data: Chi-square ( $\chi^2$ ), degrees of freedom (df), minimum discrepancy per degree of freedom (CMIN/DF), incremental fit index (IFI), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardised root mean square residuals (SRMR). After evaluating the model fit, the suitability of the scales adapted for the study were checked by assessing reliability and convergent validity. These were assessed using composite reliability coefficient (CR) and average variance extracted (AVE) respectively. Thresholds that are commonly used are  $CR > 0.70$  for reliability and  $AVE > 0.50$  for convergent validity (e.g. Hair, Hult, Ringle & Sarstedt, 2014; Netemeyer, Bearden, & Sharma, 2003). After assessing model fit and reliability and validity factor scores were imputed.

Then, before testing the hypotheses multivariate assumptions were checked. Firstly, outliers and influentials were investigated using Cook's distance, after which multicollinearity was assessed. None of the respondents in the dataset were considered influentials based on Cook's distance and no multicollinearity issues occurred as all VIF values were below 2.8, well below the threshold of 10 that is suggested by Hair, Anderson, Tatham and Black (1995). The next step was to set up the causal model in AMOS by building a structural model out of the measurement model. As convenience sampling was used for recruiting respondents, there is possibility of systematic individual differences, which would influence the results (Xiang et al., 2016). Also, to account for potentially confounding variables excluded from the model, two control variables, sex and education, were included. First direct effects were measured, and after that mediation effects were tested using bootstrapping. Lastly, moderation was tested using interactions in AMOS.

## 5. Results

This chapter presents the results of the quantitative analysis. First, the reliability and validity of the EFA and CFA are presented. Second, the results from the different regression analyses are presented and hypotheses will be verified. The result of analysing the study model using a structural equation model (SEM) shows acceptable model fit with  $\chi^2 = 82.723$ ,  $df = 40$ ,  $CMIN/DF = 2.068$ ,  $IFI = 0.933$ ,  $CFI = 0.923$ ,  $SRMR = 0.0535$ , and  $RMSEA = 0.087$ .

### 5.1 Reliability and validity

Prior to data analysis, EFA was performed to test the internal consistency and reliability of the measurement scales used in this research. In the 'extraction' column in SPSS under the communalities table all values ranged between 0.444 and 0.924, indicating that each item was considerably correlated with all other items. In total, ten factors were extracted, which together explained 69.07% of the variance. The reproduced correlation matrix revealed that there were 6.0% non-redundant residuals with absolute values greater than 0.05, suggesting good model fit. To ensure convergent validity of each factor, SPSS was asked to only display loadings in the pattern matrix above a threshold of 0.30. There were no cross-loading between any of the factors and all factors were composed of items with a minimum factor loading of 0.459, indicating good convergent validity. Discriminant validity was also assessed by examining the factor correlation matrix. The highest correlation across all factors was 0.562, denoting that the factors were distinct from one another. The last step before conducting CFA was to test the reliability and face validity of the factors. Reliability was tested using Cronbach's  $\alpha$ . All ten factors were reliable as Cronbach's  $\alpha$  were all  $0.776 \leq \alpha \leq 0.949$  (see table 1). Three items from three different factors were removed, which resulted in an improvement of Cronbach's  $\alpha$  from 0.842 to 0.883, from 0.918 to 0.924 and from 0.942 to 0.944 respectively. As a consequence of the three removed items, the total variance explained increased to 69.80%, and there were now just 5.0% non-redundant residuals with absolute values greater than 0.05. The complete pattern matrix and Cronbach's  $\alpha$  for the ten factors can be found in appendix 3.

**Table 1.** Latent variables' reliability ( $\alpha$  = Cronbach's  $\alpha$ ; CR = Composite reliability; AVE = Average Variance Extracted)

Latent variable	$\alpha$	CR	AVE
Physical attractiveness	0.776	0.786	0.563
Social attractiveness	0.850	0.859	0.605
Product match-up	0.924	0.925	0.757
Trustworthiness	0.891	0.894	0.629
Expertise	0.885	0.893	0.626
Para-social relationship	0.930	0.928	0.589
Normative	0.949	0.948	0.696
Informational	0.883	0.887	0.725
Attitude	0.944	0.940	0.797
Buying intention	0.904	0.887	0.725

The suitability of the scales adapted for the study were checked by assessing reliability and convergent validity. Initially the factor 'physical attractiveness' did not meet the required minimum value of AVE > 0.50, so the item with the lowest factor loading was dropped. After dropping the item AVE increased to above 0.50. There were no reliability or convergent validity issues with the remaining factors. No issues regarding discriminant validity were encountered as all values of AVE > MSV and all values of the square root of AVE were larger than any of the correlations in the correlation matrix (see table 2). These results suggest that all latent variables have acceptable reliability (Fornell & Larcker, 1981).

**Table 2.** Discriminant validity (Fornell & Larcker, 1981). The diagonal elements in bold represent the square root of the average variance extracted for the respective construct.

	1	2	3	4	5	6	7	8	9	10
<b>1. Physical Attractiveness</b>	<b>0.751</b>									
<b>2. Social Attractiveness</b>	0.254	<b>0.778</b>								
<b>3. Product Match-up</b>	0.329	0.196	<b>0.870</b>							
<b>4. Trustworthiness</b>	0.247	0.556	0.221	<b>0.793</b>						
<b>5. Expertise</b>	0.236	0.395	0.323	0.527	<b>0.791</b>					
<b>6. Para-social relationship</b>	0.137	0.373	0.004	0.551	0.220	<b>0.767</b>				
<b>7. Normative</b>	0.009	-0.023	0.213	-0.092	-0.058	0.196	<b>0.834</b>			
<b>8. Informational</b>	0.049	0.068	0.126	0.042	0.058	0.141	0.436	<b>0.851</b>		
<b>9. Attitude</b>	0.219	0.246	0.423	0.353	0.304	0.359	0.308	0.187	<b>0.893</b>	
<b>10. Buying Intention</b>	0.344	0.293	0.412	0.360	0.348	0.281	0.322	0.182	0.187	<b>0.883</b>

In total, CFA was performed six times on different parts of the model to assess the measures' validity. The first CFA was performed on the source characteristics. The measure with three factors showed acceptable goodness-of-fit indices ( $\chi^2 = 72.873$ ,  $df = 41$ ,  $CMIN/DF = 1.777$ ,  $IFI = 0.965$ ,  $CFI = 0.964$ ,  $RMSEA = 0.075$ ,  $SRMR = 0.0607$ ). The source credibility measure, composed of trustworthiness and expertise, showed acceptable goodness-of-fit indices as well ( $\chi^2 = 60.068$ ,  $df = 34$ ,  $CMIN/DF = 1.767$ ,  $IFI = 0.969$ ,  $CFI = 0.968$ ,  $RMSEA = 0.074$ ,  $SRMR = 0.0451$ ). The para-social relationship measure was also supported by the goodness-of-fit indices ( $\chi^2 = 47.191$ ,  $df = 25$ ,  $CMIN/DF = 1.888$ ,  $IFI = 0.975$ ,  $CFI = 0.975$ ,  $RMSEA = 0.080$ ,  $SRMR = 0.0373$ ). The two-factor model of need for conformity showed acceptable goodness-of-fit indices ( $\chi^2 = 77.576$ ,  $df = 39$ ,  $CMIN/DF = 1.989$ ,  $IFI = 0.972$ ,  $CFI = 0.971$ ,  $RMSEA = 0.084$ ,  $SRMR = 0.0464$ ). The last small model, which included attitude and buying intention, also showed adequate goodness-of-fit indices ( $\chi^2 = 31.939$ ,  $df = 17$ ,  $CMIN/DF = 1.879$ ,  $IFI = 0.986$ ,  $CFI = 0.986$ ,  $RMSEA = 0.079$ ,  $SRMR = 0.0321$ ). The sixth and final CFA was performed on the complete model. Because the researcher was not completely satisfied with the initial model fit the modification indices tool in AMOS was consulted. AMOS suggested drawing covariances between three pairs of error terms belonging to the same factor. These three error terms were highly correlated as they belonged to the same factor. Therefore, it was deemed justifiable to covary them. After drawing covariances between these three pairs of error terms these were the results of the model's goodness-of-fit indices:  $\chi^2 = 1625.492$ ,  $df = 1031$ ,  $CMIN/DF = 1.577$ ,  $IFI = 0.894$ ,  $CFI = 0.892$ ,  $RMSEA = 0.064$ , and  $SRMR = 0.0686$ .

**Table 3.** Construct measures' validity.

Source characteristics		Items	Mean	Sd	Loading
Attractiveness (Ohanian, 1990; Reysen, 2005)	Physical attractiveness	[] is classy	5.19	1.247	0.658
		[] is stylish	5.21	1.273	0.969
		[] is appealing	5.82	1.073	0.564
	Social attractiveness	[] is friendly	6.09	1.152	0.703
		[] is likeable	6.09	1.018	0.763
		[] is warm	5.99	0.975	0.870
		[] is approachable	5.70	1.200	0.765
Product match-up (Schmidt & Hitchon, 1999)		The image between [] and the endorsed product are connected	5.32	1.278	0.863
		The image between [] and the endorsed product are related	5.40	1.236	0.954
		The image between [] and the endorsed product are linked	5.36	1.161	0.897
		There is a logical connection between [] and endorsed product	5.44	1.179	0.755
$\chi^2 = 72.873$ , $df = 41$ , $CMIN/DF = 1.777$ , $IFI = 0.965$ , $CFI = 0.964$ , $RMSEA = 0.075$ , $SRMR = 0.0607$					
Source credibility		Items	Mean	Sd	Loading
Credibility (Ohanian, 1990)	Trustworthiness	[] is honest	5.82	1.058	0.721
		[] is reliable	5.92	0.887	0.772
		[] is dependable	5.63	1.024	0.737
		[] is sincere	5.88	0.960	0.854
		[] is trustworthy	5.77	1.051	0.869
	Expertise	[] is a food expert	5.74	1.144	0.741
		[] is experienced	6.07	0.915	0.790
		[] is knowledgeable	6.08	0.862	0.871
		[] is qualified	5.54	1.204	0.751
		[] is skilled	5.96	0.996	0.796
$\chi^2 = 60.068$ , $df = 34$ , $CMIN/DF = 1.767$ , $IFI = 0.969$ , $CFI = 0.968$ , $RMSEA = 0.074$ , $SRMR = 0.0451$					
		Items	Mean	Sd	Loading
Para-social relationship (adapted from Chung & Cho, 2017; Rubin & Perse, 1987)	Friendship	[] makes me feel comfortable, as if I am with a friend	5.23	1.451	0.709
		I would like to have a friendly chat with []	5.42	1.342	0.729
		If [] were not a celebrity, we would have been good friends	4.55	1.476	0.744

		Items	Mean	Sd	Loading
	<b>Understanding</b>	I think I understand [] quite well	4.84	1.371	0.748
		When [] behaves in a certain way, I know the reason for his/her behaviour	4.50	1.637	0.798
		I can feel []'s emotions in certain situations	4.47	1.718	0.823
		[] seems to understand the kind of things I want to know	4.93	1.371	0.771
		[] reminds me of myself	4.01	1.730	0.808
		I can identify with []	4.60	1.665	0.769

$\chi^2 = 47.191$ ,  $df = 25$ ,  $CMIN/DF = 1.888$ ,  $IFI = 0.975$ ,  $CFI = 0.975$ ,  $RMSEA = 0.080$ ,  $SRMR = 0.0373$

		Items	Mean	Sd	Loading
<b>Need for conformity (Bearden, Netemeyer, &amp; Teel, 1989)</b>	<b>Normative</b>	I only purchase the latest fashion styles when I am sure my friends approve of them	3.15	1.690	0.783
		It is important that others like the products and brands I buy	3.17	1.677	0.887
		When buying products, I generally purchase those brands that I think other will approve of	3.01	1.617	0.923
		If other people can see me using a product, I often purchase the brand they expect me to buy	2.93	1.693	0.942
		I like to know what brands and products make good impressions on others	3.45	1.754	0.783
		I achieve a sense of belonging by purchasing the same products and brands that others purchase	3.24	1.703	0.820
		If I want to be like someone, I often try to buy the same brands that they buy	3.21	1.787	0.761
		I often identify with other people by purchasing the same products and brands they purchase	3.30	1.797	0.751
	<b>Informational</b>	If I have little experience with a product, I often ask my friends about the product	4.67	1.632	0.803
		I often consult other people to help choose the best alternative available from a product class	4.54	1.637	0.927
		I frequently gather information from friends or family about a product before I buy	4.45	1.671	0.819

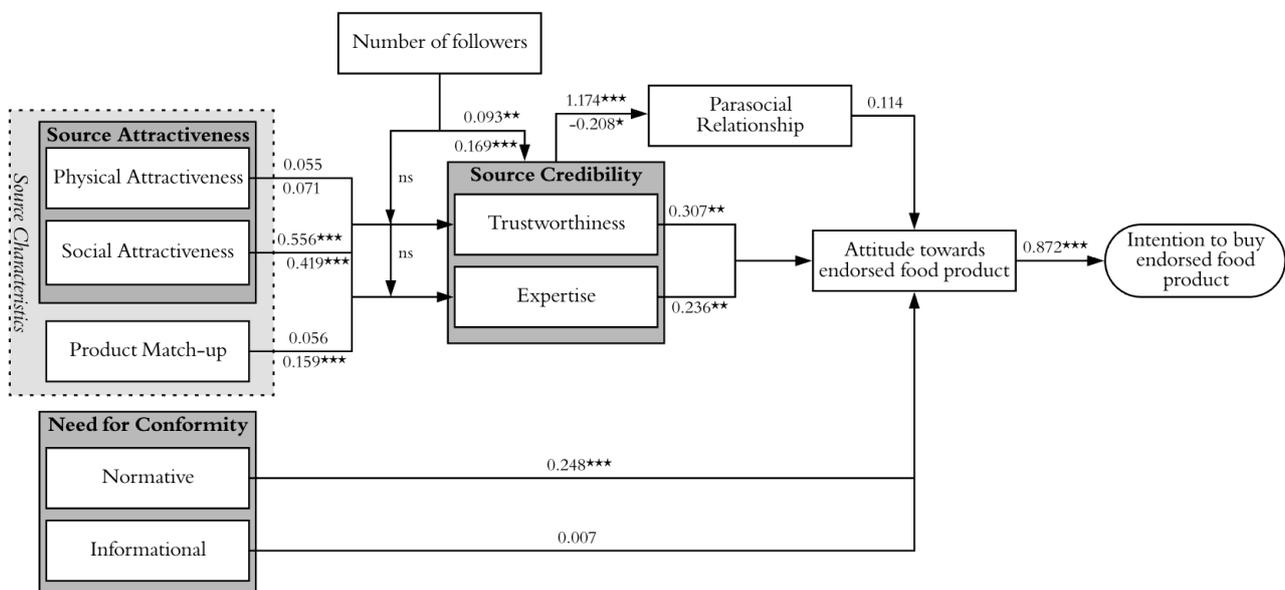
$\chi^2 = 77.576$ ,  $df = 39$ ,  $CMIN/DF = 1.989$ ,  $IFI = 0.972$ ,  $CFI = 0.971$ ,  $RMSEA = 0.084$ ,  $SRMR = 0.0464$

		Items	Mean	Sd	Loading
<b>Attitude (Spears &amp; Singh, 2004)</b>		I find this product good	5.38	1.066	0.796
		I find this product pleasant	5.44	1.045	0.891
		I find this product favourable	5.43	1.116	0.943
		I like this product	5.50	1.119	0.934

		Items	Mean	Sd	Loading
Intention to buy (adapted from Sokolova & Kefi, 2019)		It is possible that I will buy this food product in the future	5.25	1.332	0.928
		I would consider purchasing the food product promoted by []	5.27	1.362	0.923
		I would recommend/encourage people close to me to buy the endorsed food product by []	4.80	1.550	0.792
$\chi^2 = 31.939$ , $df = 17$ , $CMIN/DF = 1.879$ , $IFI = 0.986$ , $CFI = 0.986$ , $RMSEA = 0.079$ , $SRMR = 0.0321$					

## 5.2 Hypotheses tests

To test the hypotheses and to increase readability of the model and its relationships, the measurement model was first transformed into a structural model. The resulting structural model in AMOS showed acceptable model fit with  $\chi^2 = 80.040$ ,  $df = 40$ ,  $CMIN/DF = 2.001$ ,  $IFI = 0.935$ ,  $CFI = 0.925$ ,  $RMSEA = 0.085$ , and  $SRMR = 0.0533$ . With regard to the  $R^2$ , the model explained 55.5% of the variance of the intention to buy endorsed food products, 31.0% of the variance of attitude and 44.2% of the variance of para-social relationship. Additionally, 41.2% and 35.3% of the variance of trustworthiness and expertise are explained by the model respectively, which is satisfactory in social sciences (Chin, 1998). Table 4 shows path coefficients and significance of the structural model for the whole sample and Figure 2 shows the results visually. Note that the number of followers variable was incorporated in a composite variable as it was measured by only one item, making it inappropriately small for the creation of a latent variable (Hoyle, 2011).



**Figure 2.** Observed effects. Coefficients are unstandardised  $\beta$ 's.

Note: \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , ns = not significant, controls: sex, education

With regards to the effect of the three source characteristics on source credibility results are mixed. Physical attractiveness showed no statistically positive effect on source credibility. The effect of physical attractiveness on trustworthiness ( $\beta = 0.070$ ,  $t = 1.068$ ,  $p = 0.286$ ) and expertise ( $\beta = 0.389$ ,  $t = 0.861$ ,  $p = 0.389$ ) were both insignificant. Hence, results do not support H1a and H1b. The relationship between social attractiveness and source credibility was statistically significant, both for trustworthiness ( $\beta = 0.549$ ,  $t = 8.277$ ,  $p < 0.001$ ) and expertise ( $\beta = 0.392$ ,  $t = 4.845$ ,  $p < 0.001$ ).

Results thus support H2a and H2b. Hypothesis 3a and 3b proposed that product match-up would positively affect source credibility. No support was found for H3a, as the effect of product match-up on trustworthiness ( $\beta = 0.059$ ,  $t = 1.323$ ,  $p = 0.218$ ) was insignificant. The effect of product match-up on expertise ( $\beta = 0.183$ ,  $t = 3.133$ ,  $p = 0.002$ ) was significant, supporting H3b.

H4a and H4b are confirmed by the results as the number of followers increases source credibility through trustworthiness ( $\beta = 0.092$ ,  $t = 2.033$ ,  $p = 0.042$ ) as well as expertise ( $\beta = 0.206$ ,  $t = 3.884$ ,  $p < 0.001$ ). H4c assumed that the number of followers would also function as a moderator between source characteristics and source credibility. More specifically, it was hypothesised that the number of followers would strengthen the positive relationship between source characteristics and source credibility. Only a strengthening effect of number of followers on the relationship between product match-up and expertise was discovered ( $\beta = 0.128$ ,  $t = 1.769$ ,  $p = 0.077$ ). No significant strengthening effect of number of followers was found for any of the remaining source characteristics on the two source credibility dimensions ( $0.236 < p < 0.674$ ), hence disconfirming H4c.

Source credibility is found to have a significant positive effect on the attitude towards endorsed food products. Both trustworthiness ( $\beta = 0.307$ ,  $t = 2.076$ ,  $p = 0.038$ ) and expertise ( $\beta = 0.236$ ,  $t = 2.138$ ,  $p = 0.033$ ) loaded positively on attitude, supporting H5a and H5b. The effect of trustworthiness on para-social relationship ( $\beta = 1.174$ ,  $t = 8.908$ ,  $p < 0.001$ ) was significant, which is in line with H6a. H6b posed a positive effect of expertise on para-social relationship. Not only was this hypothesis disconfirmed, results provide counter evidence as the observed effect was negative ( $\beta = -0.208$ ,  $t = 1.759$ ,  $p = 0.079$ ). This results should however be interpreted with caution as the findings were significant only at  $\alpha = 10\%$ .

H7 presumed that para-social relationship would positively affect attitude, but this result was not observed ( $\beta = 0.114$ ,  $t = 1.550$ ,  $p = 0.121$ ). Para-social relationship was hypothesised to function as a mediator between source credibility and attitude. Although a significant effect was found between both components of source credibility on para-social relationship and attitude, the effect between para-social relationship and attitude was not. This result therefore violates Baron and Kenny's (1986) third condition for mediation. A mediation analysis in AMOS was conducted to test whether para-social relationship would function as a mediator between trustworthiness or expertise separately. This analysis confirmed that para-social relationship does not mediate the relation between any of the source credibility dimensions either ( $\beta = 0.134$ ,  $t = 0.874$ ,  $p = 0.192$  for trustworthiness,  $\beta = -0.240$ ,  $t = 1.108$ ,  $p = 0.135$  for expertise). Additionally, the researcher tested whether the formation of a para-social relationship had a direct effect on buying intention (implying that the formation of an attitude would be 'skipped'), but that was not the case ( $\beta = 0.023$ ,  $t = 0.401$ ,  $p = 0.688$ ).

Need for conformity was split up into two factors, which were labeled 'normative' and 'informational'. The effect of normative on attitude ( $\beta = 0.248$ ,  $t = 4.035$ ,  $p < 0.001$ ) was significant, but the effect of informational ( $\beta = 0.007$ ,  $t = 0.106$ ,  $p = 0.915$ ) was not. In other words, results partly support H8 that assumed a positive effect of need for conformity on attitude. Lastly, H9 is accepted as a significant effect of attitude on buying intention was found ( $\beta = 0.872$ ,  $t = 13.193$ ,  $p < 0.001$ ).

**Table 4.** Hypotheses tests.

Path	$\beta$	t-value	p-value	Hypotheses test
Physical attractiveness → Trustworthiness	0.070	1.068	0.286	H1a (+): Rejected
Physical attractiveness → Expertise	0.069	0.861	0.389	H1b (+): Rejected
Social attractiveness → Trustworthiness	0.549	8.277	<b>0.000</b>	H2a (+): Accepted
Social attractiveness → Expertise	0.392	4.845	<b>0.000</b>	H2b (+): Accepted
Product match-up → Trustworthiness	0.059	1.232	0.218	H3a (+): Rejected
Product match-up → Expertise	0.183	3.133	<b>0.002</b>	H3a (+): Accepted
Number of followers → trustworthiness	0.092	2.033	<b>0.042</b>	H4a (+): Accepted
Number of followers → expertise	0.206	3.884	<b>0.000</b>	H4b (+): Accepted
Number of followers → source characteristics - credibility	[-0.085, 0.128]	[0.421, 1.769]	[0.077, 0.674]	H4c (+): Rejected
Trustworthiness → para-social relationship	1.174	8.908	<b>0.000</b>	H5a (+): Accepted
Expertise → para-social relationship	-0.208	1.759	<b>0.079</b>	H5b (+): Rejected
Para-social relationship → attitude	0.114	1.550	0.121	H6 (+): Rejected
Trustworthiness → attitude	0.307	2.076	<b>0.038</b>	H7a (+): Accepted
Expertise → attitude	0.236	2.138	<b>0.033</b>	H7b (+): Accepted
Normative → attitude	0.248	4.035	<b>0.000</b>	H8a (+): Accepted
Informational → attitude	0.007	0.106	0.915	H8b (+): Rejected
Attitude → buying intention	0.872	13.193	<b>0.000</b>	H9 (+): Accepted

*Note:* Model global fit:  $\chi^2 = 80.040$ ,  $df = 40$ ,  $CMIN/DF = 2.001$ ,  $IFI = 0.935$ ,  $CFI = 0.925$ ,  $RMSEA = 0.085$ ,  $SRMR = 0.0533$

## 6. Discussion

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This chapter presents a brief summary and interpretation of the main findings. Implications for managers and academia are provided in order to show the relevance of the research. Lastly, limitations of the study are presented together with suggestions for future research.

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### 6.1 Main findings

Employing celebrity endorsement theory and para-social interaction theory, this study extends prior research on influencer endorsement effectiveness in the food domain through adding the aspects of para-social relationship, number of followers, and need for conformity. Overall, this study tested the effects of source characteristics (physical attractiveness, social attractiveness, product match-up), number of followers, source credibility (trustworthiness and expertise), para-social relationship, need for conformity, on consumer's attitude, which, in turn, affected buying intention towards endorsed food products.

Contrary to findings from Kamins (1990) and Seiler and Kucza (2017), physical attractiveness was not a significant predictor of source credibility. The absent connection between physical attractiveness source credibility suggests that a viewer's judgements about the trustworthiness and expertise of a food influencer are not influenced by his/her perceived beauty. In hindsight, this result may not come as a surprise, considering that the credibility of a cook should not depend on his/her looks. Physical appearance is arguably more important for an influencer in the beauty domain, as it can function as a selling point. Using their own appearance, an influencer can show how the results expected from the advocated products are confirmed (Sokolova & Kefi, 2019). Support was found for hypothesis two as there was a direct relationship between social attractiveness (likeability) and source credibility. While this result is analogous to findings from Brodsky et al. (2009) and Mahao and Dlodlo (2017), it is in contrast with previous research by Balaban and Mustatea (2019) and Yuan et al. (2016). The present results suggests that credibility is determined by the source's attractiveness, rather than that attractiveness is a component of source credibility. In other words, the consequence of a follower liking a food influencer is that this follower will perceive this food influencer to be a more credible source as opposed to social attractiveness being part of the influencer's credibility.

The effect of product match-up on source credibility is twofold. On the one hand, a better match-up makes a food influencer more likely to be perceived as an expert, while on the other hand it does not increase trustworthiness. A possible explanation is that whenever the food influencer and endorsed product are linked (s)he confirms and reinforces what (s)he stands for, resulting in increased perceptions of competence and expertise. The fact that product match-up does not increase trustworthiness can be exemplified by the results of Djafarova and Trofimenko (2017). Some respondents in their study indicated that endorsements are annoying and feel forced, because an influencer would only endorse a product for monetary reasons rather than that (s)he really likes the endorsed product. To summarise, the significant and positive influence of social attractiveness on both source credibility dimensions seems to indicate the role of social attractiveness as a more important factor than physical attractiveness and product match-up in credibility evaluations of food influencers.

Consistent with findings from Benedic and Granjon (2017) and Jin and Phua (2014), a direct relationship is found between the number of followers and source credibility. Food influencers with a large perceived follower base, and therefore high perceived popularity, are perceived as a more credible source than food influencers who have a small(er) perceived follower base. This finding can be supported by the following quote from Benedic and Granjon's (2017) study: "*The*

*more followers the better; it means that a lot of people appreciate the content of the influencer so (s)he is more likely to be competent”* (p. 50). In addition to the direct effect on source credibility, the moderating role of number of followers in the relation between source characteristics and source credibility was investigated. It was hypothesised that number of followers would strengthen the positive effect of source characteristics on source credibility. No strong evidence was found for this hypothesis. Only a minor significant strengthening effect was detected between product match-up and expertise. This seems to suggest that expertise is determined by a congruent product match-up, and that this effect is stronger for food influencers with larger follower bases.

In line with hypothesis 5, both source credibility dimensions positively affected attitude towards endorsed food products. Hence, higher perceived trustworthiness and expertise lead to a more favourable attitude towards endorsed food products. H6a was supported by the results, but H6b was not. The effect of trustworthiness on para-social relationship was confirmed by the analysis, but the relationship between expertise and para-social relationship was surprising as expertise negatively affected para-social relationship. A plausible explanation for the negative relationship between these two constructs is that whenever a food influencer is perceived as an expert, a viewer perceives this food influencer as less similar to oneself, which would then negatively affect the feelings of a para-social relationship.

In contrast to results from Yuan et al. (2016), no significant effect was found between para-social relationship and attitude towards endorsed foods, disconfirming H7. An additional test was performed to assess the possible effect of para-social relationship on buying intention directly, but this was also insignificant. Again, this finding is inconsistent previous research (Kim, Ko, & Kim, 2015; Lou & Kim, 2019). The findings that para-social relationship has no significant effect on neither attitude nor buying intention is rather surprising. It could however be that para-social relationship influences the attitude towards the food influencer rather than the attitude towards the endorsed food product or that due to the limited sample size no significant effect could be found.

Only the normative component of need for conformity was positively correlated with attitude towards endorsed food product. This insinuates that attitude is positively affected by people who are susceptible to normative influence. For followers who are susceptible to informational influence this effect was not apparent. The significant influence of normative influence on the attitude formation resonates with the concept of bandwagon effects on social media (Fu & Sim, 2011; Wu & Lin, 2017). As most social media platforms allow users to discuss content in the comment section anonymously, users may experience decreased sense of self, while experiencing heightened sense of belonging to a group (e.g. fans of an Instagram or YouTube food influencer). As a consequence, the likelihood of one conforming to the norms, opinions, or behaviour of the group is increased (Postmes, Spears, & Lea, 2000; Xiao et al., 2018).

Lastly, hypothesis 9 is supported by the analysis as there is evidence of the positive effect of attitude on buying intention of endorsed food products. This outcome suggests that followers with a favourable attitude towards endorsed food products would generally harbour an intention to purchase the food influencer’s endorsed food product(s). This result is in line with theory, e.g. Theory of Planned Behaviour (Ajzen, 1991), and builds on prior research by Seiler and Kucza (2017) and Wang et al. (2012).

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## 6.2 Implications

Online promotion is gaining popularity and companies are increasingly implementing social media and influencer marketing to promote their brands and products. This study adds to

knowledge on the recent stream of research towards influencer marketing by investigating the combined effects of source characteristics, number of followers, source credibility, need for conformity, para-social relationship, and attitude on the purchase intention of social media users aged between 16 and 34 years. A research framework is presented that integrates these insights from the questionnaire and previous studies about celebrity- and influencer endorsements. Consequently, it can be used as a tool for understanding the underlying process through which food influencers affect consumers' perceptions, attitudes, and buying intention.

Findings of the current research provide several implications for marketers and companies that are interested in using food influencers as a marketing tool. From a managerial perspective, this study presents marketers various practical considerations in selecting an appropriate food influencer to achieve a competitive advantage in the market. Data analysis has pointed out that social attractiveness and number of followers are the most important drivers of source credibility, source credibility is a strong predictor of attitude, and that purchase intention is significantly influenced by this attitude. Therefore, it is essential for companies to pay attention on selecting a likeable, popular, and highly credible influencer when choosing a target audience, to be able to increase consumer attitude as well as purchase intention. Although previous studies suggest that para-social relationship affects the formation of attitude or buying intention directly (e.g. Chung & Cho, 2017; Sokolova & Kefi, 2019), no evidence was found here. Nonetheless, it is essential for companies to understand food influencers' persuasive and para-social interaction talents that they convey, as food influencers would be more influential on followers that aspire them. In sum, companies must try to match the chosen food influencer with the product's and/or company's image, the characteristics of the target market, and the characteristics of the influencer, in order to create a successful marketing campaign.

An application of how the power of food influencers can also be used is in the promotion of healthy eating in order to fight global obesity. Currently, the majority of advertised foods on television and online are unhealthy and contain lots of saturated fat, salt, and/or sugars (Boyland et al., 2016). Given that food influencers have power to affect their followers' behavioural intentions and potentially actual behaviour, it would be a logical step to have them promote and endorse healthy foods. Merely promoting healthy options can prove to be successful as previous research has discovered that the more frequently people were exposed to a food item, the more it was liked and consumed (Dixon et al., 2007; Pliner, 1982; Wardle, Herrera, Cooke, & Gibson, 2003).

As for food influencers, being socially attractive, friendly and approachable can help in reaching younger generations in order to gain a larger audience. But besides working on community growth, they are advised to also care about already acquired followers to build strong para-social relationships.

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### **6.3 Limitations**

This study has a number of limitations, all of which offer opportunities for future research. As social media platforms are relatively new, research related to the impact of influencers on social media users' behaviour is limited. This is specifically true with regard to food consumption, which affects the ability to support and explain the findings of the present study.

The model fit of the tested models might pose a threat to the validity of the findings. One might argue that the model fit of the measurement model does not meet all the suggested requirements from Hu and Bentler (1999) that are commonly used by researchers, i.e.  $CFI \geq 0.95$ ,  $RMSEA \leq 0.06$ ,  $SRMR \leq 0.08$ . Despite the fact that  $CFI < 0.95$  and  $RMSEA > 0.05$ , does not mean the results should automatically be discredited. Often Hu and Bentler's (1999) cutoff scale are seen as golden rules when conducting CFA. However, this is not realistic for complex models such as the one presented

in this research. Hu and Bentler (1999) tested a model with just three factors measured by fifteen items. This is by no means comparable to the 50-item 10-factor model tested here. Additionally, Kenny and McCoach (2003) demonstrated that CFI and TLI do not function well with correctly specified models that include a large number of variables.

As the scope of the research was very specific and niche it was expected that only a limited sample size could be acquired. Because SEM is based on covariances and covariances are less stable when estimated from small samples a large number of respondents is generally required for SEM analyses (Ullman, 2006). Hoyle and Gottfredson (2015) suggest that the minimum sample size for SEM to be 200. Kline (1998) indicated that 10 to 20 participants per estimated parameter would result in a sufficient sample. With the model of the present research this would imply that the minimum number of participants required should be over 1000. The small sample size of the present research could however be an explanation for the somewhat middling model fit. Fan, Thompson and Wang (1999) discovered the existence of a downward bias, suggesting that sample fit indexes tend to present a somewhat more pessimistic picture about model fit than what is true in reality when sample size is small. Hu and Bentler (1999) mention that there is a tendency to over-reject true population models for sample sizes smaller than  $n = 250$ . Hence, the small sample size affected the statistical power of the quantitative analysis and might have negatively influenced the model fit.

There are also limitations in the data collection. Biased viewpoints or errors may occur in the data retrieved from self-reporting (Merrigan & Huston, 2009). The fact that Likert-scale items have been used for administering data has the potential drawback that it is hard to find out whether a respondent was fully focussed throughout filling in the questionnaire. A possible intervention could have been the inclusion of an attention trap that requests the respondent to “answer strongly disagree for this item if you are paying attention”. Also, convenience sampling was used to recruit as many respondents in a short amount of time. The author is aware that this might not have been the most suitable and reliable form of collecting data as the acquired sample might be under- or over-representing certain subgroups in comparison to the population of interest. This undermines the ability to generalise the research findings to the target population (Etikan, Musa, & Alkassim, 2016).

Lastly, the specific characteristics of the respondents regarding the age and familiarity with food influencers also limits the generalisability of the results. People aged between 16-34 years might comprise the majority of social media users, but younger and older users also form a substantial share. Social media users younger than 16 and older than 34 years are also likely to be influenced by influencers. However, they may not put the same emphasis on the number of followers or social attractiveness as younger users, which could lead to different results.

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## 6.4 Future research

The negative correlation between expertise and para-social relationship and the insignificant relation between para-social relationship on attitude and buying intention were two outcomes that were not anticipated beforehand. No research to date has produced equivalent results, which provides a number of opportunities for future studies to reconcile these differences.

Other results presented here are in agreement with extant studies and reaffirm that source credibility and attitude play a significant role in the build up to buying intention (Seiler & Kucza, 2017; Sokolova & Kefi, 2019). These findings implicate a possibility of using source credibility, attitude and buying intention to test actual behaviour. Future research could follow up on the findings of this study by conducting field studies in order to verify the model and the results.

The variables that are included in the present research are by no means an exhaustive list of variables that can have an impact on the buying intention of endorsed foods. Prior research regarding celebrity endorsements discovered that constructs such as perceived similarity, meaning transfer and wishful identification may also play a role in the mind of the consumer and the decision process (Dipesh, Riedel, & Martin, 2015; McCracken, 1989; Miller & Allen, 2012, Schouten et al., 2017). Additionally, further research could examine other moderators than number of followers that might influence the relationship between source characteristics and source credibility or source credibility and para-social relationship. For instance, uploading frequency or interaction/engagement with followers may be of importance. It would also be interesting to test the influencing power of male versus female food influencers or how the different sexes are affected distinctly. Constructs that currently have not been acknowledged in celebrity endorsement literature are also likely to contribute to source credibility, attitude, or the formation of para-social relationships. Therefore, further research may want to incorporate additional constructs to enhance the presented framework's explanatory power.

Millennials are not the only group of people that are active on social media and follow food influencers. Although more than half of all social media users are aged between 16-34, does not mean older people are not active on social media. In 2016, nearly 70% of people over the age of 35 was active on Facebook (Greenwood et al. 2016). Therefore, future studies could explore different consumer groups and test whether they are sensitive to the same cues or source characteristics as found in this study. Additionally, influencer reputation and follower-influencer para-social relationships may affect purchase intentions differently in other countries and/or cultures. Future research may include diverse cultural background populations to compare cultural differences. Pornpitakpan (2004) strongly suggests taking a closer look at culture as a variable, as culture seems to play a great role regarding source credibility. The degree to which followers are influenced by food influencers might also vary across social media platforms. This research did not focus on a particular social media platform, but future studies could for instance investigate whether followers of an Instagram food influencer are affected in the same manner as followers of a YouTube food influencer.

## 7. Conclusion

Underlying the celebrity endorsement literature and persuasion theory, this research aimed to investigate the impact of food influencers on consumers' buying intention of endorsed food products. The quantitative analysis of the structural model has shown that social attractiveness and number of followers are significant cues when people evaluate a food influencer's credibility. Results further indicate that source credibility affects para-social relationship as well as attitude towards endorsed food products. This attitude is also determined by need for conformity, specifically normative traits. In turn, attitude was found to be a strong determinant of the intention to buy endorsed food products. While the sample size and characteristics of the sample may limit the generalisability of the results, this study is the first to investigate the moderating role of the number of followers between source characteristics and source credibility. And although the influence of physical attractiveness and product match-up on source credibility were not as prominent as social attractiveness, the result might be different among different age groups or cultural settings. Hence, further research is required to further investigate drivers of source credibility, the effects of number of followers, and the relation between para-social relationship and attitude towards food influencers.

Taken together, this study contributes to building a theoretical foundation and has attempted to fill in the knowledge gap regarding the impact of food influencers on their followers' buying intention of endorsed food products. Additionally, findings present ample implications for both managers and academia, as well as various opportunities and suggestions for future research.

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## 9. Appendices

**Appendix 1.** Sample demographics and general statistics regarding social media use.

Demographic		Frequency	Percentage
Gender	Male	47	33.3%
	Female	94	66.7%
Age	16-20	21	14.9%
	21-25	75	53.2%
	26-34	45	31.9%
Education level	High school	11	7.8%
	Bachelor	75	53.2%
	Master	49	34.8%
	PhD	6	4.3%
Average daily time spent on social media	≥ 4 hours	23	16.3%
	[2 hours, 4 hours]	63	44.7%
	[1 hours, 2 hours]	42	29.8%
	[30 min, 1 hour]	7	5.0%
	[15 min, 30 min]	5	3.5%
	[0 min, 15 min]	1	0.7%
Platform use	Instagram	124	87.9%
	Facebook	122	86.5%
	YouTube	113	80.1%
	LinkedIn	72	51.1%
	Snapchat	59	41.8%
	Twitter	54	38.3%
	Pinterest	47	33.3%
	Other	33	23.4%
Usage social media for finding ideas and inspiration about food	Daily	25	17.7%
	3-6 times a week	27	19.1%
	Twice a week	28	19.9%
	Once a week	33	16.3%
	Once a month	32	22.7%
	Never	6	4.3%

*Note:* regarding platform use, multiple answers were possible

## Appendix 2. Questionnaire validity.

Source characteristics		Items	Mean	Standard error	Loading
Attractiveness (Ohanian, 1990; Reysen, 2005)	Physical attractiveness	[] is classy	5.19	1.247	0.658
		[] is stylish	5.21	1.273	0.969
		[] is appealing	5.82	1.073	0.564
	Social attractiveness	[] is friendly	6.09	1.152	0.703
		[] is likeable	6.09	1.018	0.763
		[] is warm	5.99	0.975	0.870
		[] is approachable	5.70	1.200	0.765
Product match-up (Schmidt & Hitchon, 1999)		The image between [] and the endorsed product are connected	5.32	1.278	0.863
		The image between [] and the endorsed product are related	5.40	1.236	0.954
		The image between [] and the endorsed product are linked	5.36	1.161	0.897
		There is a logical connection between [] and endorsed product	5.44	1.179	0.755
Credibility (Ohanian, 1990)	Trustworthiness	[] is honest	5.82	1.058	0.721
		[] is reliable	5.92	0.887	0.772
		[] is dependable	5.63	1.024	0.737
		[] is sincere	5.88	0.960	0.854
		[] is trustworthy	5.77	1.051	0.869
	Expertise	[] is a food expert	5.74	1.144	0.741
		[] is experienced	6.07	0.915	0.790
		[] is knowledgeable	6.08	0.862	0.871
		[] is qualified	5.54	1.204	0.751
		[] is skilled	5.96	0.996	0.796
Para-social relationship (adapted from Chung & Cho, 2017; Rubin & Perse, 1987)	Friendship	[] makes me feel comfortable, as if I am with a friend	5.23	1.451	0.709
		I would like to have a friendly chat with []	5.42	1.342	0.729
		If [] were not a celebrity, we would have been good friends	4.55	1.476	0.744
	Understanding	I think I understand [] quite well	4.84	1.371	0.748
		When [] behaves in a certain way, I know the reason for his/her behaviour	4.50	1.637	0.798
		I can feel []'s emotions in certain situations	4.47	1.718	0.823
		[] seems to understand the kind of things I want to know	4.93	1.371	0.771
		[] reminds me of myself	4.01	1.730	0.808
I can identify with []	4.60	1.665	0.769		
Attitude (Spears & Singh, 2004)		I find this product good	5.38	1.066	0.796
		I find this product pleasant	5.44	1.045	0.891
		I find this product favourable	5.43	1.116	0.943

Source characteristics		Items	Mean	Standard error	Loading
		I like this product	5.50	1.119	0.934
Intention to buy (adapted from Sokolova & Kefi, 2019)		It is possible that I will buy this food product in the future	5.25	1.332	0.928
		I would consider purchasing the food product promoted by []	5.27	1.362	0.923
		I would recommend/encourage people close to me to buy the endorsed food product by []	4.80	1.550	0.792
Number of followers (self created)		Some food influencers have more followers than others. According to you, what is the minimum size (in absolute numbers) that a food influencer's follower base has to consist of to be considered large?	186,993	0.033	
		Make a guess about the number of followers you think [name of selected food influencer] currently has.	8,840,082	7,087,814	
		[Name of selected food influencer] has a large number of followers	5.96	0.089	
Need for conformity (adapted from Bearden, Netemeyer, & Teel, 1989)	Normative	I only purchase the latest fashion styles when I am sure my friends approve of them	3.15	1.690	0.783
		It is important that others like the products and brands I buy	3.17	1.677	0.887
		When buying products, I generally purchase those brands that I think other will approve of	3.01	1.617	0.923
		If other people can see me using a product, I often purchase the brand they expect me to buy	2.93	1.693	0.942
		I like to know what brands and products make good impressions on others	3.45	1.754	0.783
		I achieve a sense of belonging by purchasing the same products and brands that others purchase	3.24	1.703	0.820
		If I want to be like someone, I often try to buy the same brands that they buy	3.21	1.787	0.761
		I often identify with other people by purchasing the same products and brands they purchase	3.30	1.797	0.751
	Informational	If I have little experience with a product, I often ask my friends about the product	4.67	1.632	0.803
		I often consult other people to help choose the best alternative available from a product class	4.54	1.637	0.927
		I frequently gather information from friends or family about a product before I buy	4.45	1.671	0.819

**Appendix 3. SPSS Pattern matrix and reliability.**

Factor and corresponding Cronbach's $\alpha$										
Item	1	2	3	4	5	6	7	8	9	10
	0.949	0.930	0.944	0.924	0.885	0.850	0.891	0.776	0.883	0.904
SA1						.732				
SA2						.766				
SA3						.891				
SA4						.621				
PA1								.750		
PA2								.956		
PA3								.459		
PMU2				.843						
PMU3				.926						
PMU4				.935						
PMU5				.713						
TW1							.717			
TW2							.624			
TW3							.630			
TW4							.848			
TW5							.870			
EX1					.787					
EX2					.736					
EX3					.846					
EX4					.735					
EX5					.758					
F1		.602								
F2		.632								
F3		.609								
U1		.671								
U2		.850								
U3		.867								
U4		.859								
U5		.890								
U6		.801								
A1			.820							
A2			.950							
A3			.824							

Factor and corresponding Cronbach's $\alpha$										
A4			.922							
A5			.800							
BI1										.829
BI2										.887
BI3										.483
N1	.789									
N2	.912									
N3	.942									
N4	.976									
N5	.731									
N6	.845									
N7	.752									
N8	.730									
I2									.799	
I3									.938	
I4									.711	

Extraction Method: Principal Axis Factoring.  
 Rotation Method: Promax with Kaiser Normalization.  
 a. Rotation converged in 7 iterations.