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Emerging adults' food media experiences: Preferences, opportunities, and barriers for food literacy promotion

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Abstract: This study aims to understand how and why emerging adults come into contact with food media messages, and what they perceive as positive and negative outcomes related to food literacy. Seven focus groups, stratified by gender and socio-economic status, with 37 emerging adults aged between 18 and 25 were conducted. Photovoice was used to reflect on participants' real-life food media expe-

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riences. Findings reveal that food media consumption is a combination of actively searching and incidentally encountering. The results suggest that food media messages attract emerging adults' attention by bringing content in an entertaining, engaging, and appealing way, and featuring popular food personalities. Finally, food media messages were perceived to both enhance and distort food literacy. The results show how food media messages for food literacy interventions can be designed in order to attract emerging adults' attention and fulfill their specific needs.

Keywords: food media, food literacy, focus group, emerging adults

1 Introduction

Emerging adults make the transition from adolescence to adulthood. These 18-to-25-year-olds can make independent choices, and establish their unique self apart from their parents and community (Arnett, 2014). This is also evident in the area of food-related behaviors. Often for the first time, emerging adults decide independently what to eat, how to plan their food intake, what to buy at the grocery store, what to cook, and with whom to eat a meal (Slater et al., 2018). However, research shows a decline in diet quality during the period from adolescence to adulthood (Forshee and Storey, 2006). Changes in eating behaviors include fewer fruits and vegetables (Deforche et al., 2015), increased consumption of fast foods (Niemeier et al., 2006), and regular breakfast skipping (Niemeier et al., 2006). Although emerging adults' unfavorable food-related behaviors may be part of their food culture aimed at showing off their independence, it may also result from insufficient food skills and nutrition knowledge to have a confident and empowered relationship with food (Engler-Stringer, 2010; Lang and Caraher, 2001; Slater et al., 2018). To avoid the health risks related to an unhealthy dietary pattern, it is important to promote food literacy (Vidgen and Gallegos, 2014).

The concept of "food literacy" refers to the knowledge, skills, and attitudes required to *plan and manage*, *select*, *prepare*, and *consume* a healthy meal in ways that promote physiological and psychological health (Vidgen and Gallegos, 2014). "Plan and manage" includes making time for a meal and budget planning. "Select" refers to selecting grocery items, understanding food labeling, and judging the quality of foods. "Prepare" indicates the importance of making a well-tasting meal from whatever food and kitchenware are available, and applying basic food hygiene principles. Finally, "eat" implies the understanding that food affects personal well-being, that food intake must be balanced, and that eating meals should be enjoyed. Former studies already found that higher food literacy is associated with a higher frequency of fruit and vegetable consumption (Poelman et al., 2018;

Qutteina et al., 2021), lower consumption of snacks and sugar-sweetened beverages (Poelman et al., 2018; Qutteina et al., 2021), and lower self-report ratings of long-term illness and bad health status (Palumbo et al., 2019).

In the past, food literacy programs were mainly aimed at children and adolescents (Brooks and Begley, 2014; Elsborg et al., 2022; Wickham and Carbone, 2018). Interventions that targeted emerging adults were often limited to cooking classes, and focused mainly on food preparation skills (Bernardo et al., 2018; Ellis et al., 2018; Ha and Caine-Bish, 2009). However, food literacy encompasses more than only food preparation skills. Additionally, cooking classes suffer from selection bias, high attrition rate, and lack the ability to reach large groups cost-effectively (Hasan et al., 2019; Reicks et al., 2014). Therefore, other novel strategies are warranted to reach diverse groups of emerging adults on a large scale.

Researchers have explored if and how nutrition interventions can be delivered via traditional and online media outlets (Klassen et al., 2018; Nour et al., 2017). Emerging adults, in particular, may be receptive to receiving food literacy interventions through media, as they exhibit high levels of media use (Arnett, 2014; Vandendriessche et al., 2021). Additionally, reaching emerging adults through channels and contents they already use and are willing to pay attention to may be a more effective way to deliver health messages, including ones to promote food literacy (Snyder, 2007). Within these traditional and online media, emerging adults are increasingly exposed to food-related content (e. g., cooking television and recipe videos on social media). These food media messages range from entertainment formats, such as culinary television in the form of a game, to more informational formats such as recipes (De Solier, 2005). Although food media messages are available in various formats and are omnipresent on different platforms, emerging adults can differ in which platforms they use and what content they encounter (Griffioen et al., 2021). Therefore, studying food media messages from a multi-media perspective, focusing on messages from different platforms – print media, television, and online media covering both entertainment and educational formats – is necessary. The current study aims to unravel (1) how and why emerging adults come into contact with food media messages, and (2) how they perceive food media messages as opportunities or barriers regarding food literacy.

How and why do people seek out food media messages?

As food media contents are increasingly found on multiple platforms (Lupton, 2020), a deliberate approach to understanding the exposure and use of these messages is necessary. Individuals can consume food media messages either in a more passive and incidental way, either via a reflective and goal-directed approach (Ngqangashe

et al., 2021). For example, emerging adults who want to learn how to prepare spaghetti can actively search for recipes in order to gratify their need, or individuals who use Facebook to pass time can accidentally come across recipes. This reflects two media perspectives on why individuals choose and consume media (Hartmann, 2009). On the one hand, there is a selective media perspective, which presupposes an active media audience. This media audience carefully selects media (contents) to fulfill certain needs (Katz et al., 1973; Rubin, 2009). A central theory within this perspective is the uses and gratifications theory (Ruggiero, 2000). On the other hand, according to the structural media perspective, media are consumed because of various structural characteristics such as availability, access, and channel preferences, which may occur accidentally and are not always sought out to fulfill needs (LaRose, 2010; Van Den Bulck, 1995). In this perspective, audiences are viewed to be more passive (Webster et al., 2006). Each perspective provides important insights in how individuals come into contact with food media messages. However, older research tends to focus on one perspective to explain exposure to media (Cooper and Tang, 2009). With the current media landscape, researchers argue for a combination of both perspectives in order to get nuanced insights in how individuals are exposed to media (Cooper and Tang, 2009). In the context of food media messages, one study already highlighted the importance of combining these perspectives as adolescents showed to both carefully select and more incidentally encounter food media messages (Ngqangashe et al., 2021). In this sense, taking both perspectives into account, the first research question is as follows:

RQ1: How do emerging adults come in contact with food media messages?

Independently of how emerging adults come into contact with food media messages, the question arises of why individuals pay attention to the message. According to the uses and gratifications perspective, individuals actively seek out food media messages to fulfill particular needs. Previous research tended to neglect the cross-media character of food media, and has applied the uses and gratifications theory to specific forms of food media messages such as food posts on social media (Ladhari et al., 2019; Pember et al., 2018), cooking television (Hemmah, 2009), and mukbangs (i. e., an online eating show where individuals eat food and interact with the viewers) (Kircaburun et al., 2021). Only two studies (Ngqangashe et al., 2021; Smith et al., 2013) have considered food media as a broader concept encompassing media messages about food across various platforms.

The most recurring gratification categories in food-related messages consisted of entertainment, education in terms of learning how to cook and health information, social interaction, relaxation, and escapism (Hemmah, 2009; Kircaburun et al., 2021; Ladhari et al., 2019; Ngqangashe et al., 2021; Pember et al., 2018; Smith et al., 2013).

These gratifications are focused on the content of the message; no attention has been paid to the motivations related to the platform's technological affordances. However, individuals can either choose a medium based on content and/or the platform's technological affordances (Sundar and Limperos, 2013). For example, a recent study found that, beside content-related motivations, news consumption is driven by affordances like customizability, increasing accessibility, and aesthetics (Lou et al., 2021). Especially in the context of food media, it is important to explore affordance-driven gratifications. Each media platform presents different technical affordances, leading to different ways of creating and promoting food media messages (Goodman and Jaworska, 2020), which can induce affordance-driven motivations to consume food media messages. Despite the fact that former research has mainly focused on content gratifications, researchers have recommended to consider both content and affordance-driven gratifications (e. g., interaction possibilities) to accurately understand individuals' media consumption (Rathnayake and Winter, 2018; Sundar and Limperos, 2013). Therefore, the second research question reads as follows:

RQ2: What are the content-driven and affordance-driven motives for actively searching food media?

On the other hand, Ngqangashe and colleagues (2021) showed that adolescents are also exposed more incidentally to food media messages. Although individuals can be exposed to food media messages more passively, they can still decide whether to explore it more in-depth or not (Cooper and Tang, 2009; Vraga et al., 2019). However, if and why individuals pay attention to the encountered message is not clear yet. Therefore, this study investigates both the motivations for actively searching for food media, and the reasons for paying attention to incidentally encountered food media:

RQ3: What are the reasons for paying attention to incidentally encountered food media messages?

Food media for food literacy promotion?

Besides investigating how emerging adults come into contact with food media messages and why they choose to consume these messages, this study explores how emerging adults perceive food media as barriers or opportunities for improving food literacy.

First of all, former research has tended to focus solely on individuals' motivations for seeking out media messages. However, the gratifications the audience wishes to obtain (i. e., gratifications sought) are not necessarily the same as the

gratifications they actually obtain (i. e., gratifications obtained) from food media use (Katz et al., 1973; Palmgreen et al., 1980). First of all, researchers have noted that gratifications sought were not always obtained. For example, Perse and Rubin (1990) found that individuals who watched television for social uses, ended up feeling more lonely after watching television. Second, researchers have found that gratifications can be obtained without initially seeking for them (Palmgreen et al., 1980). This means that gratifications can be obtained without expecting to find them, which is linked to more passive media consumption (Rokito et al., 2019). For example, incidentally coming across recipes on social media can result in obtaining information on how to prepare a meal. To conclude, gratifications sought and obtained are not necessarily the same, and must be distinguished in order to provide better insights into why emerging adults consume food media and what they perceive to obtain from it. In the context of food literacy, these gratifications obtained will yield insights both in whether food media already (incidentally) promote food literacy, and where there is still potential for improving food literacy promotion via food media in the future.

However, it is important to bear in mind that not all food media messages may actually promote food literacy or other healthy food behaviors. Former research has indicated that traditional and online food media messages mainly portray unhealthier foods (Ngqangashe et al., 2018; Qutteina et al., 2019). So, depending on what food media messages display, they can also cause adverse effects, such as promoting poor food choices (Ventura et al., 2021), causing an increased BMI (Pope et al., 2015), persuading people to follow niche eating styles (Lupton, 2020), and leading to confusion about what to believe (Malan et al., 2020). It is therefore important to not only investigate the potential perceived positive outcomes but also reflect on the possible negative perceptions. Therefore, the final research question this study aims to answer is:

RQ4: What do emerging adults perceive as positive and negative outcomes in relation to food literacy from consuming food media messages?

2 Method

The Consolidated Criteria for Reporting Qualitative Research (COREQ) provided the framework for reporting the study design and the findings (Tong et al., 2007). Seven focus group discussions with photovoice technique were carried out to understand how and why emerging adults consume food media, and how this is related to food literacy. Focus group discussions were chosen, as discussions between emerging

adults about food and media can caption their dynamic viewpoints and experiences (Krueger, 2014). Using photovoice techniques in focus group discussions offers emerging adults the opportunity to talk more conveniently about their real-life food media experiences, compared to just asking questions straight away without using any prompting technique (Krueger, 2014, p. 130). Furthermore, visual techniques such as photovoice have been proven to be effective in gathering and helping young people express their food and media experiences (Qutteina et al., 2019).

Prior to the data collection, ethical approval was granted by the Ethics Committee for the Social Sciences and Humanities of the University of Antwerp (Ref No: SHW_19_44). This paper is part of a larger project that aims to capture food media experiences and perceived influences on food-related behaviors among emerging adults (see also Decorte et al., 2022).

Participant selection and recruitment

Emerging adults between 18 and 25 years old were eligible to participate in one of the focus group discussions. In general, women and more educated people participate in research more often than men and less educated people do (Smith, 2008). Therefore, a stratified sampling method was used to ensure a balanced distribution of gender (female and male) and socio-economic status (low and high SES). The mother's academic level was used to determine emerging adults' SES, as they themselves are often still obtaining their education, and have little or no income during this life stage (Arnett, 2016; Hamilton and Hamilton, 2006).

Different approaches were used to recruit low- and high-SES emerging adults. We reached out to local youth services and vocational schools to recruit low-SES emerging adults. These organizations contacted the emerging adults, informed them, and arranged a location where emerging adults felt comfortable participating in a focus group discussion. Participants with a higher SES were recruited using convenience and snowball sampling techniques such as social media announcements, flyers in public places, and word-of-mouth methods. Interested emerging adults registered online. Here, they had to fill in their socio-demographic characteristics such as their gender and the mother's educational level to ensure they belonged in the right participation group.

Data collection

For each stratified subsample combination, a focus group discussion was organized in order to ensure homogeneity with sufficient variation to allow diverse expe-

riences (Krueger, 2014). However, the focus group with the subsample of female and low-SES individuals had only three participants. Therefore, an additional focus group was carried out. Seven focus group discussions with a total of 37 emerging adults were carried out between November and December 2019. See Table 1 for an overview of the focus group compositions.

Table 1: Focus group composition.

Focus Group	Number of participants	Mean age (<i>SD</i>)
High SES, mixed	6 (3 men)	22.17 (1.83)
High SES, men only	7	21.86 (1.67)
High SES, women only	6	20.83 (1.94)
Low SES, mixed	4 (1 men)	20.75 (1.71)
Low SES, men only	5	21.6 (2.07)
Low SES, women only (1)	3	20 (1)
Low SES, women only (2)	6	21.17 (1.17)
Total	37	21.32 (1.68)

The photovoice technique was used to facilitate the focus group discussions. In particular, participants were asked to keep a short photo diary one week before the planned focus group. Emerging adults needed to take at least five random images of food media messages they encountered, and five pictures of meals they prepared or ate. These photos were used as prompts to stimulate the discussions and to produce new and insightful information (Krueger, 2014, p. 130).

The focus group discussions were held at the university for emerging adults with a high SES, and at local youth services or vocational schools for low-SES participants. We deliberately chose to hold the focus group discussions at the university and at local youth services to make participating emerging adults feel comfortable and familiar. The primary researcher led the discussions, and another researcher was present to take field notes. At the start of each focus group discussion, the researcher explained the purpose of the study, and underlined that all data would be processed anonymously. All participants were fully informed at the beginning, and signed a written informed consent form. Next, participants completed a short anonymous questionnaire, including items on demographics.

After that, the interview took place and lasted between 60 and 108 minutes. During the focus groups, a semi-structured interview guide was used. This interview guide was pre-tested in two pilot focus groups. At the beginning of the interview, each participant first explained which photos of food media messages they had brought for discussion. Here, we asked more profound questions into why they

looked up these examples of food media or what they think they get out of them in general, in order to map emerging adults' food media use and motivations. Next, we turned to the photos of what they had prepared or eaten. These examples were used as prompts to ask if food media inspired them to prepare or eat these certain meals. Further questions concerned what emerging adults perceive to obtain from food media, with special attention to food literacy components such meal planning, grocery shopping, meal preparation, and eating behavior. Afterwards, everyone was allowed to ask any remaining questions, and the researcher handed out €15 shopping vouchers to thank participants for their participation.

Data analysis

The semi-structured and audio-recorded group discussions were transcribed ad verbatim with the support of field notes made by the assistant moderator (Bergin, 2018). The transcribed focus groups were imported into the NVivo 12 software for analysis. Two researchers took part in the coding process following a grounded theory approach (Corbin and Strauss, 1990). First, both researchers each open-coded a (different) focus group discussion in order to explore the data. Subsequently, the researchers moved into axial coding to establish a preliminary codebook. Codes in the data were developed and subsequently arranged into themes. Second, one researcher selectively coded all the transcriptions using the preliminary codebook while adding new topics if necessary. Finally, the other researcher used the final codebook from the first researcher to code one more focus group to guarantee inter-coder reliability. In NVivo 12, Kappa scores were calculated on a subset (10 %, one focus group) of the data (O'Connor and Joffe, 2020), and resulted in an overall intercoder agreement score of 88 %. Quotes used in this article were translated into English.

3 Results

Sample characteristics

In the seven focus groups, 21 (56.8 %) female and 16 (43.2 %) male participants with a mean age of 21.32 ($SD = 1.68$) participated. The majority of emerging adults were students (70.3 %) living fulltime at their parental home (62.2 %). Participants with a higher SES (54.1 %) are slightly more present in the sample. An overview of the sample characteristics and participants' food-related behaviors is presented in Table 2.

Table 2: Sociodemographic characteristics of participants.

Demographics	<i>n</i>	%
Nationality		
Belgian	37	100
Gender		
Women	21	56.8
Men	16	43.2
Educational attainment		
Low	3	8.1
Middle	23	62.2
High	11	29.7
Mother's educational attainment		
Low	4	10.8
Middle	13	35.1
High	20	54.1
Living situation		
With parents	23	62.2
Fully independent	8	21.6
Independent during the week	6	16.2
Employment		
Student	26	70.3
Full time	4	10.8
More than half time	3	8.1
Unemployed	3	8.1
Permanently incapacitated for work	1	2.7

Food media exposure

Emerging adults were asked to bring pictures of food media messages (explained as “any type of media message about food, except food-related advertising”) to the table. Most of these messages were examples of online food media captured with their phone or computer. Only a few examples of print food media messages were taken and discussed, namely cookbooks, recipe cards, or magazines from supermarkets. The taken online food media messages came from various media but mostly from Instagram, Pinterest, Facebook, YouTube, or recipe websites. The pictures emerging adults brought to the table were examples of various food media formats: recipes or recipe promotions, nutritional advice, food products, restaurant recommendations, and various forms of food advertising (indicating that emerging

adults could not always distinguish between traditional food-related advertising and food media messages, as defined in this study).

Participating emerging adults discussed different ways of how they came into contact with food media messages. They reported either deliberately searching for food media messages, or incidentally encountering these messages. First, emerging adults mentioned that they search for food media messages on different platforms: television and online streaming services, Google and other websites, social media (Instagram, Facebook, and Pinterest), and print media (cookbooks and food magazines). Second, all participants reported coming across high amounts of food media messages in two ways, either explicitly via family, household members, and friends, or by scrolling on social media or channel surfing on television.

In terms of incidental exposure through family, friends, and household members, participants stated that they either got tagged in or were forwarded interesting food messages, or that they watched along when family members or friends were watching cooking programs on television: “My roommate watches *Bake Off* (a game show), and then I started to watch along with her, and really it is entertaining” (male, 23, high SES).

Another way of incidental exposure participants discussed was when they were “just scrolling down” on social media and encountered food media messages. This mostly happened on social networking sites such as Facebook, Instagram, and YouTube: “One of those videos that fill up your timeline for minutes, where you scroll past, and stop to watch because something gigantic is being prepared” (male, 23, high SES).

This finding was also reflected in the pictures emerging adults brought to the focus group discussions. They stated that they were more aware than usual that they encountered many messages about food without looking for them, as they had been reminded to take screenshots for this study.

Additionally, emerging adults in this study mentioned that they perceived to see more food media messages, “because if you click once, it comes up several times, and then you keep looking, and in turn it keeps coming” (male, 21, high SES). Another participant illustrated it as follows: “and somehow I end up there, watching *Tasty*, and eventually when I see *Tasty* videos, it comes back every time” (female, 20, low SES). These examples highlight the role algorithms play in the ubiquitous food media messages in emerging adults' lives.

Finally, participants mentioned encountering food media messages on television. They revealed that when they are channel surfing on television and come across cooking television, they watch it because there is no other interesting content on television: “Yes, if the television is turned on, I will watch, but I won't set it up myself, although I find it interesting to watch” (female, 19, high SES).

Although emerging adults in this study frequently encounter food media messages, this can lead to actively searching or following specific food media messages: “If I come across videos and watch them, I save them. And then, when I think about what I want to prepare for today, I search in my saved videos to get some inspiration” (female, 19, low SES).

Motives for actively searching food media messages

The findings from the focus group discussions reveal *education*, *entertainment*, *popular food personalities*, and *convenience* as four overarching gratification themes that explain why emerging adults actively seek out food media messages. The first three categories – education, entertainment, and food personalities – are content-related gratifications, while the last category – convenience – is an affordance-driven gratification.

Education. The first theme that emerged from the focus group findings and that was mentioned most, is education. The theme “education motives” consists of (1) information about how to prepare a meal, (2) inspiration to prepare a meal, and (3) information about food and health.

The first subtheme from education motives is information about how to prepare a meal. Participants actively seek out food media messages to learn how a particular meal is prepared: “*I look it up if I really want to make something that I have no knowledge of, say for example, I want to make a curry or something, I just wouldn’t know how to start*” (male, 23, low SES).

Additionally, a few participants indicated that they watch food media messages to learn tips and tricks to make cooking more accessible or efficient: “*... I follow that because there are often easy tips, and so on*” (female, 23, high SES).

The first subtheme differs from the second. The subtheme “information about how to prepare a meal” refers to the fact that emerging adults have the intention to search for food media posts to learn how to make a meal, while the second subtheme focuses on “getting ideas to prepare a meal,” but not necessarily on learning how to prepare it:

I mainly watch, I mean I mainly look up something if I actually have no inspiration. Then I go to some YouTube channel, and then I see ... what they have prepared, and then I choose one of those ideas ... (male, 25, low SES)

The participating emerging adults search for recipes mainly directly via Google, Pinterest, or cookbooks. While meal inspiration was either searched for on Facebook, Instagram, and free supermarket magazines.

The last subtheme under education is information about food and health. In half of the focus group discussions participants mentioned that they would seek out food media messages to learn more about food- and health-related topics: "... for me it is purely informative because I am so very interested in fermenting and then watching what other people use, so that I can implement it myself, so yes for me it's for gaining information" (male, 20, high SES).

Entertainment. The second theme concerns entertainment motives. Compared to education motives, entertainment was mentioned less often, but more often in comparison to popular food personalities. The entertainment motives that emerged were (1) enjoyment, (2) humor, (3) food porn, and (4) relaxation and to pass time. Across all focus groups, participants discussed that they consume food media for entertainment motives. In this case, the participants had no intentions to fulfill other motivations, such as educational ones: "... that's for entertainment, *Kitchen Nightmares*. Sometimes he does prepare recipes, but I don't watch for that" (male, 24, high SES).

The first subtheme is enjoyment. Emerging adults in our study actively searched for food media messages because they "just really like to look up cooking videos" (male, 21, high SES). The majority specifically looked for enjoyment in food media messages through television and online streaming services, whilst Instagram and YouTube were less mentioned in this context.

Another subtheme was related to food media messages emerging adults consume to make them laugh. In this study, cooking programs on television or online streaming services were sought out to laugh and have fun. The mentioned cooking programs in this context focused on bringing entertainment-related content, such as *MasterChef* or *Cupcake Wars*, instead of step-by-step instructions on how to prepare a meal.

Food porn emerged as a third subtheme of entertainment. The participating emerging adults reported that they would follow online food-related accounts on Instagram because it is just beautiful to watch: "I follow them and they always put ... I find the pictures they take of their food, I always find them super attractive, I don't know, that always catches my eye ..." (female, 19, low SES).

The final subtheme is "relaxation and to pass time". Here, participants indicated that they would seek out food media messages to relax or to pass time: "Yes, when class is boring, I sometimes open the website to see if something new has been added and that is relaxing, yes" (female, 21, high SES).

Popular food personalities. The second to last theme concentrates on the personalities present in the food media messages. The participating emerging adults referred to several different types of food personalities, ranging from celebrity chefs (e. g., Jamie Oliver), food influencers (e. g., *Binging with Babish*), to traditional celebrities (e. g., Chrissy Teigen). Participants stated that each food personality has

their own exceptional characteristics and visions about food which ensured that participants feel or do not feel attracted to the personality. They would specifically seek out food media messages due to the personality's "character, charisma, and just the way they perform, because in the end, it is less about the food and more about the person" (male, 25, low SES).

Convenience. The final theme of why emerging adults actively consume food media messages is derived from media and platform affordances. Emerging adults cited several specific platform affordances related to convenience as motives.

First of all, emerging adults in our study stated the difference between online and print outlets to search for food media content, specifically recipes. Overall, online sources were preferred for looking for recipes, as they are primarily free of charge to use. The participants profiled themselves as "very digital" (male, 19, high SES), and perceived online sources as the easiest and fastest way to search for recipes:

Nowadays everything can be searched for via the mobile phone, so I find it easier to just look for 'spaghetti Jeroen Meus (a Belgian celebrity chef)' than to first browse a book and be able to keep it open. (female, 23, high SES)

Furthermore, online food media provide the possibility to deliver videos, pictures, and texts as recipe guidance. Additionally, online sources provide several other affordances than print media, such as filter options, which help to access complex information in an easy way: "... I am a vegetarian, and they really indicate that or have specific filter options, which is super handy ..." (female, 23, high SES).

Another participating emerging adult said that some online food media even provide them with a complete shopping list or tools to create their shopping list:

I watch Dagelijkse Kost (a TV cooking show) online. When I was just living alone, I looked it up because that site is very clear. That's really self-evident. You just choose 'pasta' or 'meat' or 'veggie'. And then you make your recipe selection, and then there is a video in which he explains the recipe. And a grocery list and a list of how to make it, and yes, it couldn't be more straightforward. (male, 23, high SES)

Only two participants sometimes preferred print media above online media: "I find that useful sometimes. I also bake stuff now and then, and when your hands are completely full, then I don't mind holding a book compared to my mobile phone or a computer or something" (female, 23, high SES).

Reasons for attending encountered food media messages

Emerging adults reported encountering large amounts of food media messages without actively seeking them out. Nevertheless, when they come across these messages spontaneously, the message catches their attention, and they engage with it. The results of the focus groups show that participants' attention is caught when (1) the food looks tasty or is portrayed in appealing ways, (2) the content seems to be interesting, enjoyable, or fascinating, or (3) they want to pass time. These motivations were brought up when discussing visual content (pictures or videos) on television, Facebook, and Instagram.

Attractive food. Participants reported that they would watch when the pictured food looks tasty or is portrayed beautifully. One interviewee said: *"If it looks good, I will keep watching ..."* (male, 23, high SES). However, when the portrayed food is not aligned with their food preferences, they would rather skip it:

If it is there, and I like the title, then I think: yes, why not. Especially things with meat because I am a great meat eater. If there is something like vegan or vegetarian, then I click it away and report it as spam because yes, I cannot accept it. (male, 21, high SES)

However, a few emerging adults illustrated that although these messages about food were not aligned with their food preferences, they would still watch. The only reason for this was that they would consume food media messages for entertainment motives:

I don't know why, I am totally not a baking lover and I don't like it either; but I always come across cake or something with chocolate in it in ... and yes, yes, I like watching but not to make it myself. (female, 19, low SES)

Arouse interest. If the food media message arouses the interest and curiosity of the emerging adults, they mention being more likely to consume the message: *"You are also curious what it eventually will be ... so yeah, you just keep watching"* (female, 19, low SES).

Pass time. The participants reported consuming encountered food media messages because, at that moment, they believed they had nothing better to do: *"... I'm actually only on Facebook when I'm on the toilet, and you have nothing to do. So, I only watch those videos when I'm on the toilet"* (male, 21, high SES); *"I would absolutely not know why, but every time I click on it, it is when I'm bored or something"* (male, 23, low SES).

Perceived positive and negative outcomes related to food literacy

In terms of planning and managing food intake. Perceived outcomes of food media messages in relation to the food literacy component of “planning and managing” was the least discussed among emerging adults. However, in three of the seven focus groups, respondents indicated that food media, especially cookbooks and online food media, helped them make a plan to manage food intake:

... we really make a plan, so we first take a look at the cookbooks, “yes, we want to eat that once and this and this and this” ... Then arrange the planning, so you know what you need from the store. (female, 21, low SES)

In terms of selecting foods. The perceptions of emerging adults regarding the component “selecting” focused on two aspects, namely obtaining food- and nutritional knowledge, and expanding interest in new and cultural foods.

In every focus group the role of food media to transfer knowledge about diets, and other food-related themes was discussed. Food media were perceived as a source of inspiration to follow a specific diet. Participants indicated that they got information about specific diets. Some emerging adults admitted that they did follow specific diets, because they had seen or read something about it in food media messages. However, not all suggested diets in food media meet the nutritional standards (Ngqangashe et al., 2018), and therefore it can also act as a barrier to consume a healthy diet: “I once came across ‘one meal a day’ on Reddit ... and I have already been doing that for a while” (male, 24, high SES).

The findings also revealed that emerging adults perceived their interest in new and cultural foods to be expanded through food media messages. Participants talked about the opportunity of food media messages to enrich their interest in new and “cultural” foods: “... on Reddit. That’s oriental cuisine, those are things that are not common here” (male, 23, low SES).

In terms of preparing meals. The most discussed perceived outcome of food media use was related to the “preparing” element of food literacy. According to our participants, food media recipes were used to prepare a meal, which was perceived to contribute to their food preparation skills. They either followed recipes diligently step-by-step, or transformed them into their own meal creations inspired by a recipe. However, if recipes seemed to be difficult to prepare, not in line with their food preferences, and required too many or unavailable ingredients, participants argued that they would not prepare the recipe or adjust it: “... but that had so many ingredients that I would never make that myself” (female, 23, low SES).

Another participant (male, 21, high SES) stated that he would adjust the recipe if he did not have all the ingredients available at home: “Yes, combining recipes does happen when I miss an ingredient, or you think ‘yes, this can be really nice in it’, then yes, I dare to improvise the recipe.”

Additionally, participants indicated that food media messages that display food (waste) hacks or innovative cooking techniques, inspired them to implement them in the kitchen.

In terms of eating meals. In five of the seven focus groups, young adults discussed food media messages as an opportunity to cook and eat together with others. For example, one female respondent (21, low SES) indicated that she used cookbooks to plan meals and prepare recipes together with friends:

... then we also grab my cookbooks and we look at “what are we going to make?”, and then we go to the shop together; and then we actually make it a bit of an activity to cook together based on the cookbook.

Additionally, several male participants even stated that they would only use food media recipes, if they cooked for others:

Interviewer: So, if you cook for yourself, you wouldn't cook from the cookbook?

Respondent: ... if you cook for somebody then you get more appreciation and you have a reason, yes, to try something different and to show off. (male, 23, high SES)

Finally, in half of the focus group discussions, and especially among the interviewed women, consuming encountered food media messages was perceived to spark hunger or food cravings, which would occasionally lead to eating. Additionally, the foods depicted in the messages the participants referred to mostly consisted of energy-dense high-calorie food: “I had seen a tasty cake on Instagram and then I wanted it and started eating cake” (female, 19, high SES).

However, emerging adults also argued that the foods depicted in food media were mostly perceived as unhealthy and high in calories, which restrained them from consuming a healthy diet: “It often encourages me to start eating more unhealthy ... because I see a lot of those very creamy things, and yes now it also comes standard on your feed ...” (female, 21, low SES).

4 Discussion and implications

Earlier studies have often only focused on (especially content-driven) motivations for consuming food media among adolescents, have not distinguished between what

individuals seek and obtain from these food media (Katz et al., 1973; Palmgreen et al., 1980), and have not linked these (potential) gratifications to food literacy components. Therefore, the current study aimed to unravel how and why emerging adults come into contact with food media messages, and what they perceive as opportunities and barriers regarding food literacy in relation to food media messages. By bringing together what emerging adults seek in or are attracted to in food media messages, and what they perceive to obtain from them, our study provides new insights that can support food literacy interventions that rely on food media messages aimed at emerging adults.

The first research question in this study sought to determine how emerging adults come into contact with food media messages. This study revealed that the participating emerging adults come into contact with food media messages in two ways: they either deliberately search for them, or encounter them on television, social media, or via personal contacts. This finding supports previous research stating that food media consumption is a combination of both active and more passive exposure (Nggangashe et al., 2021; Vaterlaus et al., 2015), reflecting two contrasting perspectives: structural and selective media choice. However, although participating emerging adults reported frequently encountering food media messages “incidentally”, we should not see them as passive audiences who solely watch food media messages because of their availability. Our research findings suggest that when emerging adults encounter food media messages, they deliberately choose to consume them or not. Therefore, drawing a precise distinction between active or passive audiences may not be desirable, which confirms previous research that we need to conceptualize audiences as both active and passive or, as Cooper and Tang (2009) suggest, “*active within structures*”. Accordingly, to adequately capture food media experiences and effects, future researchers are warranted to use sometimes contrasting media choice theories.

Additionally, another important finding of this study relates to the role personal contacts, especially peers, play in exposing emerging adults to food media messages. Participating emerging adults stated that they come into contact with food media messages through their peers. This finding is in accordance with former research among children and adolescents, that found that they share food media messages and experiences with their peers (Nggangashe et al., 2021; Ragelienė and Grønhoj, 2021). Peers play an important role in the developmental life stage of emerging adulthood, as emerging adults are sensitive to peer influences and pressure (Gardner and Steinberg, 2005). They try to fit in with their peers, live up to their peers’ expectations, and gain their peers’ approval. In other words: what their peers value will shine through in what they find important themselves. Moreover, previous research has shown that peers’ social norms can play a role in emerging adults’ dietary behaviors (Pelletier et al., 2014). This suggests that the food media

messages emerging adults retrieve from their peers are of value, and indicate something about what their peers approve of and care about, which could reflect emerging adults' food-related behaviors. For example, suppose peers forward food media messages that portray fruits and vegetables; emerging adults may assume that peers value fruits and vegetables, and will be more likely to follow that behavior. Future research should bear in mind that food media messages can be shared by peers, and therefore even have a greater potential to promote food literacy. However, if the food media message does not portray desirable food-related behaviors, reverse effects can be caused. For example, a study among adolescents found that descriptive norms (i. e., beliefs about what others eat) mediate the relationship between exposure to more unhealthy food media messages and reported healthier food intakes (Qutteina et al., 2021), because food-related messages often portray healthier foods in a social context (i. e., enjoying food with friends) (Qutteina et al., 2019). Future research should therefore also investigate if food media messages that portray healthier foods in a social way are effective to promote healthy food behaviors.

The second research question addressed why emerging adults actively search for food media messages. Three overarching content-related motives themes – education, entertainment, and food personalities – were identified. These overarching gratification themes corroborate the findings of previous research (Ngqangashe et al., 2021), that found comparable motivation themes for food media use among a study population of adolescents. Although the needs of both target populations seem to be similar in both studies, the strengths of the needs seem to differ. For example, using food media messages to learn how to prepare a recipe is much more common in emerging adulthood, as they now often live alone and independently need to prepare their own meals. Future research should be aware of these differences and make clear distinctions between the life stages of adolescents and emerging adults.

Furthermore, in contrast with the findings of Ngqangashe et al. (2021), this study found, beside content-related gratifications, one affordance-driven gratification for food media consumption, namely convenience. This finding highlights the importance for uses and gratifications researchers of acknowledging that motivations can also derive from platform affordances and should be incorporated in research when trying to capture individuals' motivations for media use, as suggested by Sundar and Limperos (2013). Online food media messages were perceived as more easy to find, affordable, and easily adjustable to personal preferences. These perceptions align with earlier research about general internet use, which found that emerging adults perceived the internet as more convenient for accessing information (Smith et al., 2015). This finding may be explained by the fact that emerging adults have grown up with and spent copious time with digital media (Vandendriessche et al.,

2021). Moreover, online food media messages can come in both textual and visual content (such as images and videos). Because online food media messages come in many formats, they can provide emerging adults with the possibility to choose out of a range of food media messages to fulfil their specific needs.

Concerning the third research question, it was found that, although food media messages were not always actively searched for, emerging adults in this study were still able to recall why they decided to further explore the encountered food media message. The focus group discussions revealed that the participating emerging adults would pay attention to the food media message if the food looks tasty, attractive, and aligned with their food preferences. Policymakers should bear this in mind when designing health messages to promote food literacy. Following existing selective exposure theories such as the selective Exposure Self- and Affect Management model (Wilson et al., 2019), our findings suggest that individuals' values and norms, in this case, food preferences, determine the selection of food media messages, which might further strengthen their existing food preferences and food intake behaviors. However, our findings suggest new insights to this theoretical assumption, as participants stated that entertainment and curiosity could overpower individual food preferences. This supports the idea of an entertainment-education strategy, where a health message is incorporated into an entertaining media message to positively influence awareness, knowledge, attitudes, and behaviors (Moyer-Gusé, 2008; Singhal et al., 2003). Because of their narrative structure, they foster involvement in the storyline, and distinguish themselves from overtly persuasive messages as they generate less resistance (Moyer-Gusé, 2008). This finding thus carefully suggests that entertainment-education food media messages can grab emerging adults' attention, and surpass emerging adults' food preferences, thereby implicitly teaching them about food. However, further research is necessary to examine if these entertaining media indeed surpass emerging adults' existing food preferences, get their attention, and effectively promote food literacy.

Finally, the last research question explored how emerging adults perceive food media to play a positive or negative role towards food literacy promotion. Emerging adults in our study quoted both positive and negative experiences with food media in relation to food literacy. This finding is in agreement with previous research showing that food media messages can both impede and facilitate food literacy (Malan et al., 2020). This result may be explained by the varying content of food media messages, as also mentioned by our participants. Similar to our results, previous studies showed that food media messages do not always meet the standards of a healthy diet (Qutteina et al., 2019). This warns us about the potential danger of existing food media messages, as they may encourage unhealthier eating habits among emerging adults. Nevertheless, the focus group discussions also reveal various desirable outcomes of food media messages towards food literacy.

In terms of perceived positive outcomes, food media messages were found to be perceived as an opportunity for all food literacy core concepts. However, perceived positive outcomes of food media messages were most mentioned for the “preparation” element of food literacy. Former research has already shown that consuming food media messages can be a successful strategy for improving food preparation skills (Surgenor et al., 2017). Additionally, in accordance with previous research, emerging adults perceive food media messages to provide them with information about how to prepare a meal (Ngqangashe et al., 2021), inspiration for (new) recipes and meal ideas (Ngqangashe et al., 2021; Vaterlaus et al., 2015), information on how to become healthier/fitter (Malan et al., 2020; Ngqangashe et al., 2021), and an interest in new and cultural foods (Tobey et al., 2019).

Taken together, these findings suggest that existing food media messages already have the power to bring certain food-related knowledge and skills to emerging adults. Further research could explore how existing food media messages bring their messages to the audiences (e. g., use of persuasive appeals) in order to reveal their techniques, which could be further experimentally tested.

The qualitative approach we used in our study allowed us to gain valuable in-depth insights into emerging adults' food-related media experiences. However, this approach also comes with some limitations. First, the nature of qualitative research does not allow us to generalize our findings. Second, our study might suffer from selection bias. Possibly, the emerging adults who participated in our focus group discussions were already more interested in nutrition and food. Furthermore, the current study did not aim to make comparisons based on socio-demographic characteristics. Therefore, further quantitative follow-up research is necessary to validate the findings and investigate differences according to gender and SES.

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