

The Golden Age of Podcasting: An Advertising Revolution

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ABSTRACT

Today, there is an estimated 2,751,157 podcasts and 123,236,633 episodes available in the whole world (Fang, 2022) and people are talking about a ‘Golden age of podcasting’. Podcast listeners tend to be young and highly educated and it is no surprise that marketers have started to use podcast advertising to reach these audiences who may be difficult to reach through traditional media. One way to advertise in podcasts is through pre-recorded host read advertisement rolls which can be placed anywhere in an episode. This research aimed to find out where a roll should be placed in order to be most effective. To test effectiveness, the widely adopted hierarchy model of effects was used, where effects on cognitions, affections, and behaviors were tested. As there is little previous research on podcast advertising, hypotheses were drawn up based on previous literature on video streaming and advertisement placement. An online experiment was conducted using an independent measures design with four different groups, and participants were exposed to either a pre-, mid-, or post-roll or a control condition which heard no ad at all. Sampling methods included convenience and snowballing, and participants were recruited online through social media ($N = 140$). Findings partially support the hierarchy of effects model as there were significant relationships between cognitions and attitudes towards the advertisement, and affections and behaviors. However, cognitions had no significant effect on attitude towards the brand, which could be explained by the idea that attitudes towards the brand are formed through many different factors, and that it takes more than one advertisement to affect this. Furthermore, results show that placement of the advertisement has no significant effect on neither cognitions, affections nor behaviors of consumers. According to these findings, podcast makers should revise their advertisement pricings since mid-rolls tend to cost most and post-rolls least, according to what is thought to be most effective. On the other hand, marketers can use findings of this research when negotiating about advertising prices.

KEYWORDS: *Podcast advertising, hierarchy model of effects, advertisement placement, pre-, mid- and post-rolls*

Table of Contents

1. Introduction.....	4
1.1. Podcasts on the rise.....	4
1.2. The RQ and its relevance.....	6
2. Theoretical Framework.....	8
2.1. The rise of podcasting.....	8
2.2. Advertising in podcasts.....	10
2.3. Different types of podcast advertisements.....	11
2.4. Advertisement placement in video streaming.....	13
2.5. Hierarchy model of effects.....	14
2.5.1. Cognitions (H1 and H2).....	15
2.5.2. Affections (H3 - H7).....	17
2.5.3. Behaviours (H8 – H14).....	18
3. Methodology.....	20
3.1. Participants and sampling.....	20
3.2. Research design and stimulus material.....	21
3.3. Main variables.....	23
3.4. Control variables.....	25
3.3. Analysis.....	26
4. Results.....	28
4.1. Effects on cognitions (H1 and H2).....	28
4.2. Effects on affections (H3 - H11).....	28
4.3. Effects on behaviours (H12 – H14).....	30
5. Discussion and conclusion.....	32
5.1. Effects on cognitions.....	32
5.2. Effects on affections.....	34
5.3. Effects on behaviours.....	37
5.4. Limitations.....	37
5.5. Practical implications.....	39
5.6. Future directions.....	40
6. References.....	42
7. Appendix A.....	53
8. Appendix B.....	62

1. Introduction

In recent years, podcasting has been on the rise: an estimated 100 million people listened to podcasts in the USA in 2020, and the number of listeners is expected to reach 125 million by the end of 2022 (Adgate, 2021). People are even talking about a ‘Golden age of podcasting’ (Berry, 2015), and a ‘Podcast Revolution’ (Walker, 2019). Today, there is an estimated number of 2,751,157 podcasts and 123,236,633 episodes available in the whole world (Fang, 2022). It is because of this rapid spread of the platform that companies are increasingly implementing podcast advertising in their marketing strategies: in 2015, 10% of marketers said they wanted to advertise in podcast in the next six months. This number increased to 37% when marketeers were asked the same question in 2020 (Adgate, 2021). This study aims at contributing to the small amount of existing literature on podcast advertising, to help understand what works best in this relatively new, but rapidly growing medium. Specifically, this paper investigates the role of placement of advertisements within an episode (i.e., before, during or after) on advertisement effectiveness.

1.1. Podcasts on the rise

Podcasts have not always been this popular. Back in 2004 when Apple first introduced podcasting, a podcast would usually consist of a downloadable version of an already existing radio show, or amateurish conversations uploaded by tech nerds who were the only ones who know how to upload their blogs in an aural way now (Hutchinson, 2022). Nevertheless, fast-forward 17 years and podcasts are unmissable in the media landscape today. There are various reasons for this rise in podcasting. First of all, nearly everyone owns a smartphone with access to the internet, giving access to a huge number of different shows for free. Second, podcasts are very user friendly: 75% of podcast listeners say that they do not experience any difficulties using podcasts (Domenichini, 2018). However, this was not always the case. Normally, a platform is created, and the content on this platform grows and fills it up. But podcasts existed before there was a platform to easily distribute and download them. This changed in 2012 when Apple introduced a stand-alone podcast app for people to use on their phones, which created easy and friendly access to a wide range of podcasts (Hutchinson, 2022).

Anyone with a microphone, a computer, and access to the internet can record, edit, and distribute a podcast. This therefore leads to many different people creating podcasts on all kinds of topics, having podcasts catering to every niche. People listen to podcasts for many different reasons (Chan-Olmsted & Wang, 2022). For example, people listen to

podcasts to make something interesting out of the mundane such as commuting, to expand their knowledge on a field they already know about or on completely new topics, to stay informed about current news and events, or to feel less alone, as hosts may eventually start to feel as your friends (McClung & Johnson, 2010). Additionally, there has been a big spike in podcast listening due to the COVID-19 pandemic, where 22% of consumers state they listened to podcasts more during the pandemic than they did before (Meyers, 2021). Research has found that 60% of listening is done at home (Adgate, 2021), therefore it is no surprise that the lockdown has led to an increase in podcast consumers. Market research conducted in The Netherlands in 2021 did find that the growth in new listeners in the country is starting to stagnate, as it grew from 44% to 46% in that year, compared to a 4% growth in the year before and even a 10% growth the year before that (Petit & Linders, 2021). Nevertheless, when looking forward, this same research does not expect audience numbers to go down any time soon, thus is it very relevant to learn as much as possible on this new market which is here to stay.

In the beginnings of podcasts, its audiences were all quite similar: intelligent, educated Apple users who were looking to be entertained (Sawyer, 2020). But since nowadays there is a niche podcast for everything, the audiences vary much more too. Podcasts are especially popular amongst young audiences: in the US, 49% of monthly podcast listeners are between the ages of 12 and 34, 40% are between 35 and 54, and 22% are older than 55 (Riverside, 2022). These numbers are similar in Netherlands, where research has found that people between the ages of 18 and 35 make up for the largest group of podcast listeners (Winn, 2021). Furthermore, podcast listeners tend to be highly educated, with a university degree and a full-time job (Riverside, 2022).

As podcast listeners tend to be young and highly educated, it is no surprise that advertisers have started to step into the podcasting market. Podcasts give advertisers the opportunity to reach young audiences who may be difficult to reach through traditional media. Also, based on their educational and employment statistics, consumers have the resources to make purchasing decisions and show interest in products that they are exposed to (Riverside, 2022). Research has already found that 69% of podcast listeners state that advertisements increase their awareness of a brand, and more than half of the respondents of this same study indicate that this even led to them buying the product of the advertised brand (Winn, 2017). Advertisers use the parasocial bond that is created between consumers and podcasts hosts to their advantage. A survey conducted by Edison in 2020 found that nearly

half of consumers exposed to podcast advertising actually believed that the hosts also use the products they were selling themselves.

1.2. The RQ and its relevance

There are various ways in which advertising can be incorporated in podcasts. The most common forms are advertisement rolls, native advertisements, and sponsorship deals (Domenichini and Möhrer, 2018). Previous research has found that podcast advertising has been proven to be effective in many ways. One study found that 53% of respondents agreed or strongly agreed that they would look online for more information about a product after it being advertised in a podcast, adding to 29% who actually purchased the good or service advertised (Costers, 2022). Another study found that podcast advertising is the best recalled way of advertising, with 86% of the respondents remembering a podcast advertisement, compared to advertisements on social media and website (Kaufer, 2021). Furthermore, it has been found that 33% of listeners never, or rarely, skip a podcast advertisement, and 38% only do so sometimes (Edison, 2020). Even so, there are still lots of areas in which our knowledge can still be expanded regarding the effectiveness of podcast advertising. In particular, little research has been conducted on the effectiveness of advertising rolls in podcast (Ritter and Cho, 2009). Rolls, also known as audio ads, are specific types of podcast advertisements which are recorded and produced independent of the podcast episode. They are scripted and can be both host-read or announcer-read. These advertisements normally take between 15-30 seconds and can be placed anywhere in the podcast episode (Friedman, 2018).

To the best of the researcher's knowledge, up until this day there has been only one study, conducted by Ritter and Cho (2009), which looks at the effectiveness of advertising rolls in podcasts. They compared pre-rolls (rolls placed before an episode) to mid-rolls (rolls placed during an episode). They did not, however, take into account post-rolls (rolls placed at the end of an episode). Specifically, they investigated the effect of podcast advertisement placement on perceived obtrusiveness and listener irritation. As there is no research yet conducted on the effects of placement of advertising rolls in podcast on consumer's cognitions, affections and behaviors, the following research question has been developed:

Does the placement order of advertising rolls (pre- versus mid- and post-roll) in podcast influence their effect on the cognitions, attitudes and behaviors towards the ad and brand of Dutch consumers in the age of 18 to 35?

Advertising research is important because in practice it can be hard to measure exactly what is effective and what is not. As advertising pioneer John Wanamaker (1838-1922) said: ‘Half the money I spend on advertising is wasted; the trouble is I don't know which half’. Even if after marketing the sales of a product increase, you still cannot know exactly what the cause of this was. This is a problem which Wanamaker faced in those times, but it is still a problem now, with traditional media advertising but even more with newer forms of advertising where we know even less about, such as podcast advertising. The research question of this paper is therefore of great societal relevance as results can contribute to helping marketeers with their strategies when they decide to advertise in podcast.

In order to answer the research question, this paper first provides a theoretical framework to base hypotheses on. The history of podcast and podcast advertising will be outlined, followed by an overview of the possible ways of advertising. Next, a summary of the literature on advertisement placement in video streaming is provided, as there is little previous research on podcast advertisement placement. Then, the hierarchy model of effects is explained, proposing hypotheses at each of the three different levels of the model (cognitions, affections, and behaviors). An online experiment was conducted, and the design and methods of data collection is described. Results of the experiment are presented and in the final chapter these findings are discussed, followed by the limitations of this research, practical implications and directions for future research.

2. Theoretical framework

In continuation, this paper will first provide an overview of the beginnings and history of podcasting. Different types of podcasts formats and different ways of advertising are highlighted. Then, the choice of podcast format and advertising format for this particular study is addressed and justified. Since there is little to no previous research on the effects of placement of rolls in podcast advertising, this paper uses previous research on advertising rolls in video streaming services as a reference. Therefore, an overview of the findings regarding the effectiveness of advertising rolls in video streaming services are presented. Finally, in order to answer the research question, this paper builds on the hierarchy model of effects. Thus, this model is explained, and several hypotheses will be drawn up based on the literature on this model and on the findings of the effects of placement of rolls in videos streaming.

2.1. The rise of podcasting

Defining and describing podcasts has proven to be challenging, due the fact that they are so new and evolving at an extremely high pace. The history of podcasting is being created now, making it hard to document the developments as they are occurring. New ways of communicating, consumption and progressing formats, together with the audio technology revolution, create challenges for defining terms (Balanuta, 2021). Podcasting has now been around for almost 20 years, and is used in many ways, ranging from education to commercial goals (Heshmat et al., 2018).

It has been argued that the foundation of podcast was grounded when in 2000 software developer Dave Winer brought out a new RSS (Bottomley, 2015). RSS, which stands for Rich Site Summary or Really Simple Syndication, is a web syndication format that allows digital audio files to be delivered in RSS feeds, and Winer has also referred to these RSS feeds as ‘audioblogging’ sites (Winer, 2000). This new RSS then enabled people to upload and share audio files with the rest of the web. However, the word ‘podcasting’ was first heard in 2004 from Ben Hammersly (2004), a Guardian Journalist, who used it to describe “a new boom in amateur radio”. The term derived from the combination of the iPod portable music player and broadcast-live streaming. He described this new form as “liberating listeners from time and place and allowing them to talk back to the programme-makers” (Smith, 2018). Even though it was clearly different to radio, as you download the content that you want to listen to, Hammersley and other early adopters still called it ‘radio’.

In 2005, the word ‘Podcast’ was declared as the Word of the Year by the New Oxford American Dictionary (Wired, 2005), who defined it as follows: “A digital recording of a radio broadcast or similar program made available on the internet for downloading to a personal audio player”. Another broader definition is given by Bonini (2015, p.21), who defined it as a “technology used to distribute, receive, and listen, on-demand, to sound content produced by traditional editors such as radio, publishing houses, journalists, and educational institutions, as well as content created by independent radio producers, artists, and radio amateurs”. Having stemmed off radio, podcasts have adapted to changing technologies and consumption patterns of the world around it. Therefore, from this viewpoint it makes sense to see it as an extension of radio (Berry, 2015). Different early articles have debated about whether podcasting would be a threat or an opportunity to radio (e.g., Berry, 2006 and Menduni, 2007). Berry (2006) concluded that “radio would prove resistant to the threats posed by this new upstart”, while Menduni (2007) argued that it might be a missing stage in the evolution of radio, combining the mobile characteristic of radio with the global reach of the worldwide web. Although some do like to compare podcasting to radio, others see it as a different, standing-alone, medium, such as for example Spinelli and Dan (2019) who believe that the features of podcasts are unique and should be detached from radio as a medium. Nevertheless, it is similar to radio in the way that it is foremost an audio format, it has relatively low production costs, and it is portable (Olguta, 2021).

In the early days of podcasting, the medium did not explode as some had expected it to do. Experts thought that this might be due to the confusing term ‘podcast’, but they especially attributed this stagnation to the fact that podcasting emerged around about the same time as new video-streaming platforms did, such as YouTube (Bottomley, 2015). Nevertheless, in the last couple of years, the podcasting industry has grown exponentially. Between 2013 and 2018 the percentage of Americans who had ever listened to a podcast jumped from 27% to 44% and there are currently more than 400 million users worldwide, making up for 20.3% of all internet users (Pew Research Center, 2021) In The Netherlands this is no different. A survey found that in 2021 46% of the respondents listened to podcasts (Petit & Linders, 2021).

But why do people listen to podcasts? Podcasting is clearly the result of a changing media landscape with changing consumption habits of audiences. People nowadays are looking for “snackable” content which they can listen to whenever they want, wherever they want. Also, listening to a podcast can be easily combined with other activities, such as driving, exercising, and cleaning. This is because its features stimulate the mind, while at the

same time allowing people to pursue these other activities (Perks and Turner, 2018). The podcast hosts serve as companions when doing an individual activity and allow one to immerse themselves in a different world.

Later developments in the podcasting landscape have also moved towards video, as many shows are now also being filmed (Balanuta, 2021). However, this research will focus solely on the audio version of podcast, as this continues to be the most important feature of the medium. There are many different types of podcasts. Logue (2020) identifies seven: interview, solo, conversation among cohosts, roundtable, non-fictional storytelling, fiction, and a combination of formats. Depending on the type of message a podcast maker wants to convey, different formats are appropriate (Logue, 2020). This research will focus on conversations among co-hosts, since this is one of the most popular and widely adopted formats (Osborne, 2022).

2.2. Advertising in podcasts

The rise in podcasting has also created new opportunities to reach audiences and this has not gone unnoticed by advertisers and marketers who are increasingly using podcast for commercial purposes through podcast advertising. Podcast advertising has been generally defined as “the targeted placement of advertising spots within non-corporate podcast episodes” (Krugmann & Pallus, 2008, p. 115). There are several characteristics that make podcast an attractive medium for advertisers. First, the relationship consumers have to a medium has been found to have an effect on how they perceive advertisements in a medium (Hirschman & Thompson, 1997). Podcasting is often in a narrative form, where the listener is transported into the world of the hosts. Podcast audiences tend to be extremely loyal and engage intensely with the hosts, leading to a much more personal experience than radio (Perks & Turner, 2019). Research has found that person-to-person situations lead to an increase in communication effectiveness (Eisend, 2004). When listening to a podcast, listeners tend to feel a certain intimacy with the hosts, often because the hosts position themselves in a story they wish to tell, and then tell the story as if they were talking to a friend (Lindgreen, 2016). This intimacy increases credibility, which may explain an increase in advertising effectiveness. Furthermore, advertisements are often presented by the podcast hosts, thus are perceived as authentic, and are accepted by the consumers (Riismandel, 2018). The findings of a survey conducted by Moe (2021) reinforce this. One participant even said: “I want to help by buying something they’ve recommended in an episode because we’re a team and they need my support.”

Secondly, due to the relatively low production costs, both broadcasting companies and amateur producers can easily make a show (Hunt, 2021). Therefore, there is a huge amount of podcast content available online, with a different podcast for every niche. These niche podcasts have a niche audience, making it very attractive for advertisers who are looking to target a specific group of consumers, in an environment that is strongly connected to their brand. Not only is the right audience then targeted, the advertisements can then also be tailored exactly to the liking of this audience (Oliver, 2022).

Thirdly, the nature of the advertisements themselves also play a role in effectiveness. With podcast shows, there is often only one or two sponsors advertising the show. Each advertisement will take up to two minutes maximum, in an episode of say about an hour. With traditional media channels such as television, a show of an hour may have up to three commercial breaks of about seven minutes each. The same goes for advertising on social media, where there may be several different banners competing for attention. This may lead to an aversion to advertising, which is constantly competing for the attention of the consumer, whereas in podcasting this is much more lowkey (Hsu, 2019).

The podcast characteristics just mentioned have led to successful and effective advertising. Studies have found that consumers listen to podcast advertisements, and even prefer them over other forms of advertisements (Vilceanu et al., 2021). Advertising in podcasts has also resulted effective in practice, leading to higher recall rates, brand lift, purchase intention, and consumer actions (e.g., Vetrano 2019 and Bouvard 2019). Podcast advertising has experienced a huge growth in the past years. In the U.S., revenues reached \$1.4 billion in 2021, having increased 72% that year and experts predict that revenue will reach \$4 billion by 2024 (Forristal, 2022). In The Netherlands there has been a 50% growth in revenue in 2020 in audio advertising, mainly due to the growth in podcast advertising (Oerlemans, 2021). Nevertheless, experts argue that this growth will not stop any time soon, and that over-commercialization of podcasts has yet to occur (Brinson & Lemon, 2022).

2.3. Different types of podcast advertisements

Advertisements in podcasts can differ in various ways: from the person who presents it, how it is presented, how it is produced, its duration, to where it is placed in the episode. Regarding who presents the advertisement, there are two ways. One way is through host-read advertisements, where the host of the podcast show presents the advertisement. Then there are announcer-read advertisements, where an external speaker or voice actor presents the advertisement. Listeners prefer host-read over announcer-read advertisements, and it is

therefore no surprise that the former comprises a much larger share of podcast advertising revenue, compared to the latter (Forristal, 2022).

Different styles of presentation include on-scripted and off-scripted (Ettmüller, 2021). With on-scripted advertising, the advertiser writes a script which is read out by the host. In off-scripted advertisements, the host is normally given several unique selling points and do's and do nots from the advertiser, and is then free to present the brand in his or her own style, without using a whole script. Also, the advertisement can be live-read, meaning that the hosts present the advertisements while it is broadcasted at the same time as it is recorded, or it can be pre-produced (Ettmüller, 2021). If it is pre-produced, the advertisement is recorded first, then edited, and then inserted in the episode. An advertisement's duration normally varies between 15 seconds to three minutes (Meyers, 2022), usually depending on the factors stated above. Non-scripted advertisements which are embedded into the context of the episode tend to be longer than scripted advertising rolls (Hutchinson, 2021). Finally, podcast advertisements can vary based on their placement within an episode. A pre-roll is placed before the start of the podcast, a mid-roll is placed somewhere in the middle of an episode, and a post-roll is placed at the end of a podcast (Hunt, 2022).

By combining the different factors above, different advertisement formats emerge. The most popular ones are advertisement rolls, native advertisements, and sponsorships (Domenichini & Möhrer, 2018). Rolls, also known as audio ads, are recorded and produced independent of the podcast episode. They are scripted and can be both host-read or announcer-read. These advertisements normally take between 15-30 seconds and can be placed anywhere in the podcast episode (Friedman, 2018). Pre- and post-rolls tend to be shorter than mid-rolls and cost less, as it is easier for consumers to hear over them since they are not part of the episode. On the other hand, mid-rolls are more expensive, as they are usually longer and harder to miss by listeners. Mid-rolls are usually placed with care in an episode, normally in between two segments of the podcast. Native advertisements are embedded in the content of the podcast (Rowles & Rogers, 2019). They are therefore always host-read and non-scripted, and the host usually uses personal recommendations and anecdotes to present the brand. Furthermore, native advertisements can last up to two minutes, meaning that a lot of information about the brand can be provided. Because of these characteristics, natives may be perceived as very trustworthy. Lastly, a podcast can be sponsored by a brand (Brinson & Lemon, 2022). This is a simple form of advertisement, where the listeners are told either at the beginning or end of an episode that this podcast is sponsored by a certain brand.

Each form of advertisement has its advantages and disadvantages. For example, previous research has found that host-read messages lead to greater ad recall, leading to an increase in consumer purchases and recommendations (Nanji, 2020) but these advertisements are most expensive (Schaffer, 2021). On the other hand, pre-recorded rolls are perceived as less engaging and effective at capturing attention, but tend to be a lot cheaper (Hewitt, 2020). This research will focus on a combination of these two, namely pre-recorded host-read advertising rolls, because it is one of the most commonly used advertising format in podcasts (Riverside, 2022). Furthermore, this research will compare the effectiveness of pre-, mid- and post-rolls. To the best of the researcher's knowledge, there has only been one study which has looked at the effect of placement of a roll in podcasts. This was the experiment conducted by Ritter and Cho (2009). They compared pre-rolls (rolls placed before an episode) to mid-rolls (rolls placed during an episode). They did not, however, take into account post-rolls (rolls placed at the end of an episode). Furthermore, Ritter and Cho (2009) look at the effects on perceived obtrusiveness and listener irritation, but effectiveness of an advertisement can be measured in many other different ways. At the end of the day, the goal of an advertisement is to sell a product. Much of today's advertising research focuses on the psychological advertising effects which eventually lead to economic effects such as the purchase of the product. A widely adopted theory used to test advertisement effectiveness therefore is the hierarchy model of effects which is based on the assumption that consumers first respond to an advertising in a cognitive way which then triggers the creation of feelings and opinions about the advertisement and brand, eventually leading to purchase (Rehman et al., 2014). Thus, this research is the first to explore the effect of roll placement for host-read pre-recorded podcast advertisements and, therefore, fills in a gap in the literature.

2.4. Advertisement placement in video streaming

As said earlier, to the best of the researcher's knowledge, there is no research yet done on the effects of different placements of rolls in podcast on advertisement effectiveness. This is a gap in literature which this research aims to fill. However, there has been some research on the role of ad placement in video streaming. These advertisements present similar qualities as in podcasting, and it is therefore worthwhile to look at what previous findings show in this field.

Krishnan and Sitaraman (2013) were the first to assess the effectiveness of in-stream video advertisement rolls and did so based on their completion and abandonment rates. Here, mid-rolls were completed more than pre-rolls, but pre-rolls did better than post-rolls. Adding

to this, Li and Lo (2015) found that mid-roll advertisements on YouTube resulted in better brand-name recognition compared to pre- and post-rolls, due to attention spill-over. Carlitz (2020), however, questioned whether mid-roll advertisements were to be favoured. His experiment on the relationship between the placement of a video advertisement and advertisement avoidance and the attitude towards the ad showed that consumers have a more negative attitude towards a mid-roll than a pre-roll advertisement. Carlitz' conclusion was reinforced by Freeman and colleagues (2021) who found that mid-roll advertisements on video streaming social networking sites were perceived as more intrusive and made consumers more annoyed.

2.5. Hierarchy Model of Effects

The effectiveness of advertisements can be measured by external variables, such as sales and revenues of the advertised brand. However, these numbers do not take into account internal psychological effects of the consumer, such as opinions, feelings, and intentions. Sales and revenues do not show why people do or do not buy a certain product or service. Therefore, assessing only the external economic variables is not enough to measure effectiveness of advertisements, and much of today's advertising research focuses on the psychological advertising effects which eventually lead to the economic affects. As Gleich (2003) explains, the goal of advertising is to attract the attention of the audience, to generate a positive reaction which then eventually leads to purchase. This research will also be taking this approach, by using the widely adopted hierarchy of effects model.

Briefly summarized, the hierarchy of effects model is based on the assumption that consumers first respond to an advertising in a cognitive way which then triggers the creation of feelings and opinions about the advertisement and brand (Rehman et al., 2014). These attitudes then lead to affecting the consumer's behavior, where a favorable assessment ends with the purchase of the product or service advertised (Rehman et al., 2014). The hierarchy of effects model has been used in advertising research for over a century, and was first introduced by Lewis in 1898, who categorized the three steps as: attention, interest, and desire. Later on, Lewis added 'action' (more particularly, purchase) as a final step, creating the AIDA model (Lewis, 1990). Other scholars suggested additional steps should be added, for example 'satisfaction' or 'confidence' (Barry, 1987). Lavidge and Steiner (1961) proposed that the different steps had to always undergo this specific order, suggesting that consumers cannot jump directly to the step of making the purchase. They suggested that there were seven steps that consumers go through: unawareness, awareness, knowledge, liking,

preference, conviction, and purchase. Some steps are more important than others, and some also occur at the same time. Cognitions, such as awareness and knowledge can occur simultaneously, and so can affections and behaviors. Liking and preference are very closely related, just like convictions and purchase. Due to this, the model was adapted to the three steps that this paper will also be using: cognition, affections and behaviors (Lavidge and Steiner, 1961).

Just like any other research model, the hierarchy of effects model has its limitations. For instance, it has been argued that this model does not take each customer's personal experience into account (Hall, 2002). Furthermore, research has found that consumers do not necessarily always have to go through the steps in this specific order in order to reach purchase intention (Weilbacher, 2001). An advertisement may have an unconscious effect on the affections of a consumer, even if he or she is not able to recall the advertisement (Weilbacher, 2001). Nevertheless, Barry (2002) defended the model by saying that it can be used for any marketing communication research, as the goal is the same as with advertising: persuading consumers to purchase. It is for this reason that although the hierarchy of effects model is quite old, it is still widely adopted in advertising research nowadays (e.g., Duffett, 2020, Smith et al., 2020, Etmüller, 2021).

From the hierarchy of effects model, the conceptual model below has been developed (Figure 1). The 14 hypotheses which will be tested will be elaborated on in the sections below. Here, each of the three steps in the hierarchy model of effects will be looked at in more detail, and applied to the placement of advertising rolls in podcasts.

2.5.1. Cognitions (H1 and H2)

In terms of advertising, cognitive effects can be defined as “the knowledge and brand accessibility or top-of-mind awareness effect of advertising on consumers” (Ha, 2020, p.278). It is often referred to as the variable that provides information about how much knowledge of the advertisement recipients still have after being exposed to it. Attention and memory play an important role in this process. ‘Attention’ has been defined as “the amount of mental effort or cognitive capacity allocated to a task” (Kahneman, 1973). Being exposed to an advertisement does not necessarily mean that the advertisement message will also be processed by consumers (Li et al., 2002). Research has found that greater attention given to an advertisement by a consumer leads to a better memory of it (Kuisma et al., 2010). This is because paying attention to the advertisements allows consumers' brains to process, store and later retrieve given information (Li & Lo, 2015). A validated way for assessing brand

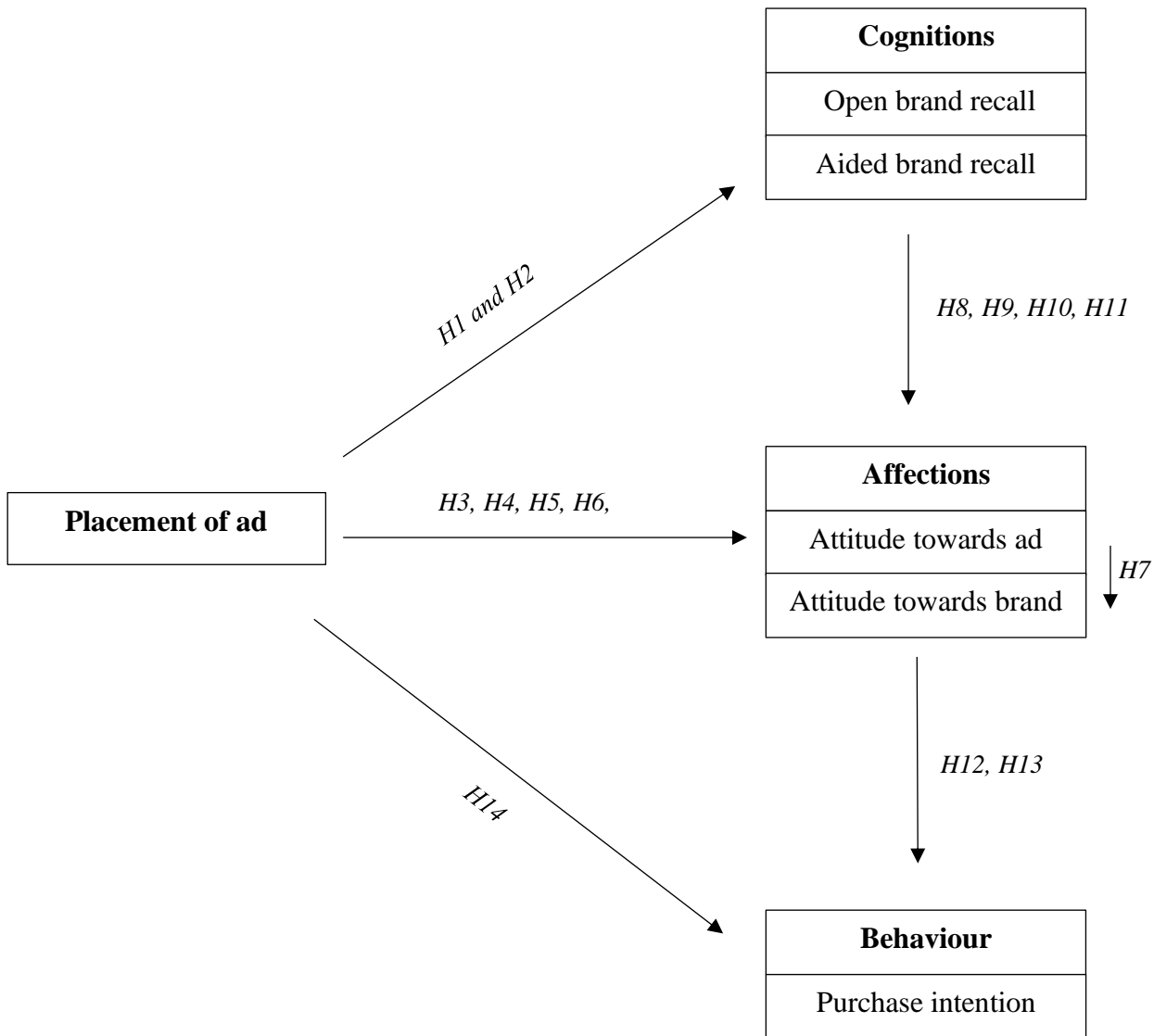


Figure 1: Conceptual model

memory is by measuring both open brand recall and aided brand recall (Chan, 2022). Open brand recall is used to test whether a consumer is able to retrieve the name of the brand from memory without any help and is usually tested by asking an open question. With aided brand recall, the consumer gets help in recalling the brand, by for example providing a closed question with multiple questions, where one is the correct one. Thus, this research will be testing both open and aided brand recall in order to assess brand memory.

Previous research has found that forcing exposure towards an advertisement triggers the consumer's attention, leading to higher brand memory (Kahneman, 1973). This has also been found in research on television commercials: advertisements placed in the middle of a program have found to be better remembered than advertisements placed before or after a

television program (Moorman et al., 2002). The reason for this is that the consumer expects an advertisement less, and it therefore grabs their attention (Moorman et al., 2005). Even though nearly twenty years later one does expect commercials when watching television, the explanation may still apply to podcasts as listeners might not expect a conversation between two people to be suddenly interrupted. Li & Lo (2015) found similar findings for in-stream video advertisements: mid-roll advertisements led to higher brand memory. Therefore, this research proposed the following hypothesis:

H1: Mid-roll advertisements will lead to better brand memory than pre- and post-rolls.

Furthermore, Nam et al. (2019) also found that pre-rolls led to higher brand memory than post-rolls, since consumers do not expect a pre-roll either. Also, consumers of media have a certain attention span when consuming media. When watching or listening to a certain show, attention will at first increase. However, eventually attention will reach its peak and then decrease again (Li and Lo, 2015). Some people might not even listen to an entire episode, or turn it off when it is reaching its end. These assumptions therefore led to the following hypothesis:

H2: Post-rolls will score lowest on brand memory compared to pre- and mid-rolls.

2.5.2. Affections (H3, H4, H5, H6, and H7)

When consumers are exposed to an advertisement, they will form a certain opinion about the advertisement and brand they are seeing or, in this case, hearing. This opinion can be either positive or negative. Measuring affective variables is therefore a good tool for investigating effectiveness of advertisements (Antoniadis et al., 2019). There are various affective variables which can be studied when measuring advertising effectiveness. One widely adopted variable is attitude towards the ad. Attitude towards the ad has been defined as “the image, which could be favorable or unfavorable, that a consumer has about the advertisement he or she has been exposed to” (Lutz, 1985, p.53). In addition, many previous studies have found that attitude towards the ad has a strong direct impact on attitude towards the brand (for example Schmuck et al., 2018). Attitude towards the brand is the extent to which the consumer finds the brand appealing (Nguyen et al., 2013) and has been defined as: “a relatively enduring, unidimensional summary evaluation of the brand that presumably energizes behaviour” (Spears & Singh, 2004, p. 55). More specifically than there simply

being a correlation, research has found that attitude towards the ad has a positive effect on attitude towards the brand (MacKenzie et al., 1986). This means that when a consumer likes a certain advertisement, he or she will also positively evaluate the brand of this advertisement.

Importantly, Rettie (2001) found that when consumers are highly engaged in an activity, such as carefully listening to a podcast, they can become irritated when this is interrupted (Thota & Biswas, 2009). Furthermore, Ritter and Cho (2009) found that podcast pre-rolls led to lower levels of obtrusiveness and irritation compared to mid-rolls in podcasts. They did not, however, compare this to the effects of post-rolls. Still, previous research also indicates that irritation caused by advertisements has a negative influence on attitude towards the ad (Thota & Biswas, 2009).

Although often carefully placed within a podcast episode, mid-rolls nevertheless always interrupt the narrative of a podcast episode, possibly leading to irritation. As mentioned earlier, Carlitz (2020) found in his experiment on advertisements in video streaming that consumers have a more negative attitude towards the ad when it is a mid-roll. Furthermore, since *H2* suggests that post-rolls will score low on cognitions, following the hierarchy model of effects, it can be predicted that they will score lower on affections than pre-rolls too. Therefore, the following hypotheses were formulated:

H3: Pre-rolls will score highest on attitude towards the ad

H4: Pre-rolls will score highest on attitude towards the brand

H5: Mid-rolls will score lowest on attitudes towards the advertisement

H6: Mid-rolls will score lowest on attitudes towards the brand

In addition, in order to test whether a higher attitude towards the ad also leads to a higher attitude towards the brand, the following hypothesis was drawn up:

H7: Ad attitudes are positively related to brand attitudes.

2.5.3. Behaviors (*H8* - *H14*)

Research has found that a positive attitude towards the brand can lead to a higher purchase intention among consumers (Cialdini, 1993). Although research of Cialdini (1993) has been published quite some time ago now, it is classic one which is still cited and used a lot nowadays (e.g., Allatafa, 2021, Sokolova et al., 2021, Zollo et al., 2021). Also, at the end of the day a company wants to sell its products or services, therefore purchase intention is

often considered an important dependent variable in marketing and advertising research. Purchase intention is often defined as “an individual’s conscious plan to make an effort to purchase a given brand” (Spears & Singh, 2004, p. 56). Even though purchase intention does not mean that the consumer will eventually actually buy the product or service, the theory of planned behavior states that concrete behavioral intentions are very closely related to actual behaviors (Ajzen, 2011). Therefore, this paper will use this as a variable to evaluate the effectiveness of the different ad placements.

None of the previously cited research upon which the hypotheses above are based investigate effects on purchase intention. Therefore, the following hypotheses cannot be based on previous research on the placement of rolls in video streaming. Nevertheless, purchase intention is the final step in the hierarchy of effects model and is preceded by cognitions and affections. Thus, based on previous hypotheses on cognitions and affections, a hypothesis for purchase intention can be formulated. This paper has proposed that mid-rolls are most effective for brand memory. Moreover, it is argued that post-rolls will score very low at brand memory, as the attention span of the consumer is at its lowest towards the end of a podcast episode. However, it is also hypothesised that pre-rolls will score higher on attitude towards the ad and attitude towards the brand than mid-rolls, due to the interruptive nature of mid-rolls leading to irritation. Furthermore, this paper wants to examine all the links within the hierarchy model of effects, in order to test whether this was a reliable framework for this research. Therefore, the following hypotheses have been formulated:

H8: Open recall positively affects attitude towards the ad.

H9: Open recall positively affects attitude towards the brand.

H10: Aided recall positively affects attitude towards ad.

H11: Aided recall positively affects attitude towards the brand.

H12: Attitude towards the ad positively affects purchase intention.

H13: Attitude towards the brand positively affects purchase intention.

H14: Mid-rolls will lead to better purchase intentions than post-rolls (H14a), however pre-rolls will result in the highest purchase intentions (H14b).

3. Methodology

The following chapter outlines the methods used to answer the research question of this paper. First, the reasons for choosing convenience and snowball sampling is argued for and elaborated on. Second, the design of the online experiment and the podcast advertisement used to measure the effects of placement on advertisement effectiveness is described. Third, the main variables (cognitions, affections and behaviors) are illustrated and operationalized. Finally, control variables of the experiment are discussed, and the analysis methods are presented.

3.1. Participants and sampling

In order to answer the research question '*Does the placement order of advertising rolls (pre- versus mid- and post-roll) in podcast influence their effect on the cognitions, attitudes and behaviors towards the ad and brand of Dutch consumers in the age of 18 to 35?*', an online experiment was conducted. The whole questionnaire can be found in the appendix in Dutch (Appendix A) and in English (Appendix B). An online experiment allows the researcher to collect data from a large number of participants easier than with an offline experiment (Carter & Emerson, 2012), because participants are probably more willing to take part in an experiment if they can do so at a time and place of their own choice, rather than having to go somewhere to take part in the experiment.

Regarding sampling, convenience and snowball sampling was used. Data collection started on May 12th in 2022 and took 20 days in total. The online experiment was shared with people in the researcher's network through social media, together with the question if they could also share it with their network. More specifically, the link of the experiment was sent in various group chats on Whatsapp, which the researcher knew contained people matching sampling criteria. Furthermore, the link was placed on the Instagram and LinkedIn page of the researcher. Even though these methods are not the most desired, as the sample they collect may not be very representative for the whole population (Fricker, 2008), research has found that 97% of the people between 20 and 39 are social media users (Oosterveer, 2014). Accordingly, using social media to reach out to the target audience is an appropriate and useful method. Furthermore, these online environments allowed for participants to easily pass on the link to their network.

After opening the link, but before being able to take part of the survey, participants were shown an introduction text explaining the purpose of the survey. Here it said that this study was part of the research of a master student's thesis at the Erasmus University of

Rotterdam. Participants were told a cover story to cover up the exact purpose of the experiment. It said that the goal of the questionnaire was to identify the extent to which young Dutch people can relate and identify themselves with podcast hosts. Furthermore, it was stressed that participation was completely voluntary and that they were able to stop at all times. Additionally, participants were told that anonymity would be kept at all times. Before being able to start with the questionnaire, participants had to provide their consent and agree to participate.

This research is interested in Dutch people between the ages of 18 and 35, since this group makes up for a large percentage of podcast listeners in The Netherlands (Winn, 2021). In total, 150 people took part in the online questionnaire. However, at the beginning of the survey, participants were asked what their age was. If their age was below 18 or above 35, they were redirected to the end of the survey ($n = 2$). The experiment was conducted in Dutch, since this is the audience that this research is interested in. Additionally, a soundcheck was done by asking two questions. The first one was “Did you just hear an excerpt of De Zelfspodcast?” (Yes/No). If their answer was ‘No’ ($n = 2$), they were redirected to the end of the survey. Second, respondents were asked: ‘What did Sander and Jaap talk about in the excerpt you just heard?’. Four answers were provided where one was correct. If participants chose an incorrect answer, they were redirected to the end of the survey ($n = 6$). This question was included to make sure that participants were actually paying attention to the material they were exposed to. This all resulted in a valid sample of 140 participants, which is in line with Walker’s (2014) criteria of required sample size when conducting an online experiment.

From the valid sample ($n = 140$) who completed the whole experiment, 54.3% participants were female and 45.7% were male. As mentioned above, all participants were aged between 18 and 35, and the average age was 25.36 ($SD = 3.77$). Regarding education level, the largest group of participants were those who had obtained a Master’s degree (32.9%), followed by those who had obtained a University bachelor’s degree (29.3%). Regarding the rest of the participants, 27.1% had obtained an Applied Science bachelor’s degree, and 10.7% had obtained something else (high school, MBO degree, or a PHD degree or higher).

3.2. Research design and stimulus material

The experiment consisted of four conditions, where participants were assigned to randomly through Qualtrics. In each condition, they heard a part of a podcast episode. In three of the conditions, participants also heard an advertising roll. In one condition the ad was

placed right before the start of the excerpt (pre-roll, $n = 37$), in the other it was placed during the excerpt (mid-roll, $n = 37$), and in the third it was played right after the excerpt was finished (post-roll, $n = 34$). The fourth condition was a control condition, where the participant heard only the excerpt of the podcast, with no advertisement ($n = 32$). This was to check how participants felt about the podcast regardless of it having an advertisement or not, to ensure that this isn't a variable affecting the outcome of the experiment. With the manipulation check ("Where in the excerpt did you hear an advertisement?"), most participants in the experimental conditions were able to identify the correct answer ($n = 30$ for the pre-roll; $n = 32$ for the mid-roll, and $n = 30$ for the post-roll). To be able to test the effect of the different conditions on effectiveness of the ad, a new variable, named 'condition', was computed where 1 = 'Pre-roll', 2 = 'Mid-roll', 3 = 'Post-roll' and 4 = 'Control group'.

The podcast that participants were exposed to was the Dutch De Zelfspodcast, one of the most streamed podcasts of the Netherlands in 2021 (Spotify, 2021). Its target audience is roughly 50/50 men and women, between the ages of 18 and 35, which is also the population that this research is interested in. The format of De Zelfspodcast is one where hosts have a conversation with each other. In this case the hosts are Jaap Reesema and Sander Schimmelpennick, two famous Dutch men, but more importantly, two best friends. In the podcast, Sander and Jaap talk about their lives and current events in the world. De Zelfspodcast is produced by a commercial company, Tonny Media, rather than a public broadcaster, therefore its audience is used to hearing ads while listening to the podcast.

To make sure that participants listened to the whole excerpt, a timer tool was used that ensured that participants could only proceed to the next questions after the whole excerpt had been played. For the sake of the cover story, after hearing the stimulus, participants were then asked ten questions about identification and relatability towards the hosts Sander and Jaap. Furthermore, participants were asked "Before hearing this excerpt, were you familiar with De Zelfspodcast?" (67.1% answered 'Yes' and 32.1% 'No'). Participants were asked: "Have you ever listened to De Zelfspodcast before?" (Yes/No), and "How often do you listen to De Zelfspodcast?" (Every week/Every month/ Once every two months/ Less than once every two months) and "What do you think about De Zelfspodcast?". Of the 67.1% who were familiar with the De Zelfspodcast, 73.4% had listened to De Zelfspodcast before, and 26.6% people had not. Of those who had listened to De Zelfspodcast before, 23% listen every week, 18.8% every month, 14.5% once every two months and 43.5% listen less than once every two months. For the question "How much do you like De Zelfspodcast?", 1.4% answered 'Don't

like at all’, 2.9% ‘Don’t like’, 18.8% ‘Neither like nor dislike’, 58% ‘Like’ and 20.3% ‘Like it a lot’.

The experiment used only a short excerpt of an episode, since it would probably be hard to find enough respondents willing to spend nearly an hour of their time listening to an entire podcast episode for an online questionnaire. However, the extract was chosen with care, to ensure that it was still long enough to be interrupted by a mid-roll, and that the story being told also made sense on its own, without the rest of the episode. The excerpt which was used was extracted from episode 18 of the third season of De Zelfspodcast. This episode was aired the 4th of February in 2022, meaning that it was a recent episode, increasing ecological validity of the experiment. The excerpt was two minutes and three seconds long, and Sander and Jaap, the hosts of the podcasts, first talk about school and education, and then talk about football. The mid-roll is placed in between these two topics, making it a logical break with a smooth transition. Furthermore, the start of the fragment was also the start of a new section of the podcast, and the excerpt ends with the end of a story told by one of the hosts. Therefore, it is a suitable fragment to place either a pre-, mid- or post-roll, without it making it sound odd or out of place to the participants.

The advertisement used is an existing advertisement roll of the brand HelloFresh. HelloFresh is a subscription-based meal-kit company, that delivers boxes for meals at home to consumers. HelloFresh is a fairly neutral brand, as it targeted at both men and women, and offers a good that everybody needs: food. Therefore, it lends itself well for an experiment. The advertisement roll used is one that has actually been placed in De Zelfspodcast giving the experiment high ecological validity. The ad is host-read and lasts 25 seconds, matching the length of a podcast advertising roll in general (Friedman, 2018).

3.3. Main variables

The effectiveness of the ad, as explained earlier, was measured using the hierarchy model of effects. Thus, the experimental conditions of this experiment differ based on the positioning of the roll, and the dependent variables are cognitions, attitudes, and behaviors towards the advertisement. To test the effectiveness of the ads, validated scales for these dependent variables were used.

The effect on cognitions was tested by checking both open brand recall and aided brand recall (Chan, 2022). First, participants were asked if they heard an ad at all (65.7% answered ‘Yes’, and 34.% answered ‘No’). If they did not, this could be because of two reasons. The first is that they were in the control group and they were not exposed to an ad,

the second is that they did not remember hearing the ad. In either case, participants are redirected to further questions, skipping those on brand memory. This is because the attitudes and behaviors of those not exposed to an advertisement will be used as baseline to compare the experimental conditions to. Regarding those who were exposed to an advertisement, but could not recall this: it is still possible that the ad had effect on affections and behaviours, skipping the cognitive stage in the hierarchical model of effect (Weilbacher, 2001). To test open brand recall the participants were asked: “For which brand did you hear an advertisement?”. The correct answer is HelloFresh, and it was counted as correct regardless of the spelling or use of capital letters. In total 82% of the participants provided a correct answer. To test aided brand recall, participants were asked two questions. First: “Was the brand advertised a food delivery service” (Yes/No), where 91.8% said ‘Yes’, and 8.2% ‘No’. Subsequently, participants were asked “Which of the following brands did you hear in the advertisement?” (i.e., Crisp/De Krat/Flink/HelloFresh/Picnic/I don’t know). Here, 85.9% of respondents gave the correct answer.

Attitudes were measured by looking at attitude towards the ad and attitude towards the brand. Attitude towards the ad was measured using a six-item seven-point semantic differential scale (Spears & Singh, 2004), where participants were asked to rate the advertisement as bad/good, unpleasant/pleasant, unlikeable/likeable, boring/interesting, tasteless/tasteful, and artless/artful ($\alpha = .94$, in Spears & Singh, 2004). In the current study, the Cronbrach alpha coefficient was .91, and would not increase significantly if any item would be deleted, therefore all six items were used. Respondents’ average score was 4.24 ($SD = 1.20$), hence respondents seemed to have a favourable attitude towards the ad.

Attitude towards the brand was measured by using another validated scale developed by Spears and Singh (2004), where their α was .98. This was a five-item seven-point semantic differential scale where participants were asked to describe their overall feelings about the brand described in the ad that they heard. The items in the scale were: bad/good, unpleasant/pleasant, unfavorable/favorable, boring/interesting, and unlikeable/likeable. This scale too was found to be reliable in the current study when using all five items ($\alpha = .93$). The average score was 4.91 ($SD = 1.10$), hence respondents had a favourable attitude towards HelloFresh.

The effect on behaviour was measured by testing purchase intention. For purchase intention, the validated standard single item of Morrison (1979) was used, with a 7-point Likert scale. Hence, participants were asked the following question: “Please indicate how likely it is that you will buy a subscription for HelloFresh meal-kits?”, where 1 = very

unlikely and 7 = very likely, where the mean was 3.38 ($SD = 1.62$). Overall, respondents seemed neutral about whether or not they would buy a subscription for HelloFresh.

3.4. Control variables

To ensure that outcomes were not affected by any other variables, several control questions were added to the survey. First, demographic variables such as gender (1 = 'Male', 2 = 'Female', 3 = 'Other', 4 = 'Prefer not to say'), age (measured as a continuous variable) and educational level (1 = 'None', 2 = 'Secondary school', 3 = 'MBO', 4 = 'Applied Science bachelor's degree', 5 = 'University bachelor's degree', 6 = 'Master's degree', 7 = 'PHD or higher' or 8 = 'Prefer not to say') were measured to examine whether these had an influence on the relationships which were found. These were then computed into a new variable where all missing values and unticked options were left out. For gender, this resulted in 0 = 'Male' and 1 = 'Female'. For educational level, the data left over was 1 = 'Secondary school', 2 = 'MBO', 3 = 'Applied Science bachelor's degree', 4 = 'University bachelor's degree', 5 = 'Master's degree' and 6 = 'PHD or higher'. Pearson product-moment correlation coefficients was used to check the relationships between the control variables and the main variables. A small, positive correlation was found between age and purchase intention ($r = .33, p = .000$). A logical explanation for this could be that the older people get, the more willing and capable they are of spending money on meal kit delivery services, rather than going to the supermarket themselves, which is probably the cheaper option. There was no relationship found between gender and cognitions, attitude and behaviors, and the same counts for educational level.

Second, the survey included control questions about the brand HelloFresh. These questions included: "Have you ever used HelloFresh?" (where 43.6% answered 'Yes' and 56.4% 'No') and "To what extent do you think HelloFresh suits you?" with a 5-point Likert scale where 1 = Really bad and 5 = Really good ($M = 2.99, SD = 1.06$). Additionally, participants were asked "Do you like cooking?" where the answers were measured with a 5-point Likert scale where 1 = Not at all and 5 = A lot ($M = 3.90, SD = 1.08$), and "How often do you cook at home?". For this question 10.7% answered 'Every day', 22.9% 'Five or six times a week', 39.3% 'Three or four times a week', 19.3% 'Once or twice a week' and 7.9% 'Less than once a week'. These questions were included since people who never cook at home will also never use HelloFresh. Conducting a Pearson product-moment correlation coefficient analysis, it was found that there was a small, positive correlation between purchase intention and whether or not participants had used HelloFresh before ($r = .266, p =$

.001). Furthermore, the level of which participants think HelloFresh suits them is positively related to both attitude towards the brand ($r = .468, p = .000$) and purchase intention ($r = .681, p = .000$). Nevertheless, there was no significant relationship between how much people like cooking and how much they cook, and their cognitions, attitudes and behaviors.

3.5. Analysis

To analyse the collected data SPSS was used. Data was collected using Qualtrics, allowing it to be downloaded and used in SPSS. First, the raw data was extracted and uploaded on SPSS. Second, following the procedures described above the data was cleaned and the key variables were constructed. Now, it is explained how each hypothesis was tested. Importantly, as can be derived from the previous section, when testing the effect of condition on attitude towards the brand, participants' assessment of the extent to which HelloFresh suits them had to be included as a control variable. When testing the effect of condition on purchase intention, this variable along with age and a prior subscription were controlled for.

H1 and *H2* pertaining to brand memory was tested twice: Once using open recall as the dependent variable and once using aided recall as the dependent variable. Since in both cases both the independent and dependent variables were categorical, chi-square tests of independence was conducted. Such tests reveal whether brand memory is higher or lower under particular conditions. The control condition was excluded from the analyses here. This was done by computing a new variable from the condition variable, where all participants in the control group were coded as missing values.

H3, H4, H5, and H6 pertaining to the effect of ad placement on affections and *H8, H9, H10 and H11* pertaining to the effect of cognitions on affections was tested in four variable combinations, namely (1) open recall – attitude towards the ad, (2) open recall – attitude towards the brand, (3) aided recall – attitude towards the ad, and (4) aided recall and attitude towards the brand. These hypotheses were tested with ANCOVAs, using condition as a fixed factor, and cognitions as a covariate. In the analyses that pertain to attitude towards the brand (i.e., combinations 2 and 4), participants' assessment of the extent to which HelloFresh suits them was included as a covariate too. *H7* was tested using a multiple linear regression analysis, where attitude toward the brand was the dependent variable and attitude towards the ad and the extent to which people think HelloFresh suits them were the independent variables.

Finally, *H12, H13, and H14* were tested using a single ANCOVA, using condition as a fixed factor, and both affection variables (i.e., attitude towards the ad and attitude towards

the brand) as covariates. Furthermore, the relevant control variables were included as covariates too.

4. Results

In the following chapter, the hypotheses suggested by this paper were tested by using the analyses mentioned previously, leading to them being either accepted or rejected. At the end of this section, the conceptual model is presented again but this time with the hypotheses presented in either green or red (see Figure 2), in order to provide a quick and clear overview of which hypotheses are accepted and which are rejected.

4.1. Effects on cognitions (*H1 and H2*)

In order to test the first two hypotheses of this paper, which state that mid-roll advertisements will lead to better brand memory than pre- and post-roll ads (*H1*) and that post-rolls will score lowest (*H2*), two chi-square tests of independence were conducted. First, using open recall as dependent variable and second using aided recall as dependent variable, as these were the two variables used to test brand memory. A condition variable excluding the control condition was used, since respondents who were not exposed to the ad were not asked about it either. Regarding the effect on open brand recall, no significant association was found, $\chi^2(2, n = 92) = 5.25, p = .072$. Even though the association is not statistically significant, it can be considered as marginally significant because $p < .10$. When taking a look at what participants answered per condition it was found that in the first condition, where the advertisement was placed at the beginning of the podcast excerpt, 90.3% of respondents were able to recall that HelloFresh was the brand being advertised. Participants who were exposed to the mid-roll also scored quite high on open brand recall, with 80.6% giving the correct answer. However, in the condition of the post-roll only 66.7% gave the right answer.

Regarding the effects of ad placement on aided recall, it can be concluded that there is no significant relationship between the two variables, $\chi^2(2, n = 92) = 1.33, p = .516$. Here, respondents in all three conditions scored high on the right answer: 88.9% in the first condition, 89.3% in the second and 80.0% in the third. Since both the results for open brand recall and aided brand recall the relationships resulted to be not significant, *H1* and *H2* were rejected.

4.2. Effects on affections (*H3 - H11*)

The effects of ad placement and cognitions on affections were tested by using four different variable combinations, the first one being open recall and attitude towards the ad. An ANCOVA analysis was run where the condition variable was used as a fixed factor, the

dependent variable was attitude towards the ad, and open recall was used as a covariate. In this analysis again, the condition variable excluding the control condition was used. A significant relationship between open recall and attitude towards the ad was found, $F(1, 79) = 5.42, p = .023$. Participants who were not able to recall the brand scored lower on brand attitude ($M = 3.39, SD = 1.23$) than those who gave the right answer ($M = 3.75, SD = 0.98$). *H8*, which assumes that open recall positively affects attitude towards the ad was therefore accepted. However, the three different conditions had no significant effect on attitude towards the ad, $F(2, 79) = 1.54, p = .221$. *H3* and *H5* were therefore rejected.

Next, another ANCOVA was done, where the dependent variable was the attitude towards the brand, the condition variable was used as a fixed factor and open recall was a covariate. Furthermore, participants' assessment of the extent to which HelloFresh suits them was included as a covariate too, as it was found that this was a variable affecting brand attitude. In this analysis, the condition variable including those in the control group was used, since all participants were asked about attitude towards the brand. Results show that condition had no significant effect on attitude towards the brand, $F(2, 85) = 0.41, p = .668$, rejecting *H4* and *H6*. Furthermore, the analysis showed that open recall has no significant effect on attitude towards the brand, $F(1, 85) = .10, p = .753$. *H9* proposed that open recall positively affects attitude towards the brand and was therefore rejected.

Third, the relationship between aided recall and attitude towards the ad was tested using another ANCOVA. The dependent variable was attitude towards the ad and the condition variable excluding participants in the control group was used as a fixed factor. Aided recall was used as a covariate. There was no significant difference between the three conditions on attitude towards the ad, $F(2, 79) = .40, p = .679$, once again rejecting *H3* and *H5* which suggested that pre-rolls will score highest on attitude towards the ad, and mid-rolls will score lowest. The results did show a significant effect of aided recall on attitude towards advertisement, $F(1, 79) = 7.43, p = .008$. This effect was found to be positive, since respondents who remembered the advertisement correctly when provided with several options scored higher on attitude towards the ad ($M = 4.38, SD = 1.21$), than those who gave the wrong answer ($M = 3.43, SD = 0.81$). *H10*, which states that aided recall positively affects attitude towards the ad was therefore accepted.

Then, another ANCOVA was run where attitude towards the brand was the dependent variable. The covariates were aided recall and participants' assessment of the extent to which HelloFresh suits them, and the condition variable including those in the control group was used as a fixed factor, since all participants were asked about attitude towards the brand. This

analysis too found that the different conditions had no significant effect on attitude towards the brand, $F(2, 78) = .86, p = .426$, rejecting $H4$ and $H6$. Furthermore, there was no significant relationship between aided recall and attitude towards the brand, $F(1, 78) = 0.22, p = .638$. $H11$ was therefore rejected, as it predicted that aided recall would positively affect attitude towards the brand.

Finally, $H7$, which suggests that advertisement attitudes are positively related to brand attitudes was tested by using a multiple linear regression analysis. Attitude toward the brand was the dependent variable and attitude towards the ad and the extent to which people think HelloFresh suits them were the independent variables. Results show that the independent variables significantly predict the dependent variable, $F(2, 82) = 19.13, p = .000, R^2 = .32$. This means that 32% of the dependent variable (attitude towards the brand) can be predicted by the independent variables. The relationship between the two types of attitudes was positive, as $B = .30, \text{Beta} = .33, p = .000$. This means that by every 1 unit that goes up on attitude towards the ad, attitude towards the brand goes up by .30. $H7$ was therefore accepted.

4.3. Effects on behaviours ($H12, H13$ and $H14$)

To test effects on behaviors, in this case purchase intention, $H12, H13$, and $H14$ were tested using a single ANCOVA, using condition as a fixed factor, and both affection variables (i.e., attitude towards the ad and attitude towards the brand) as covariates. Furthermore, the relevant control variables were included as covariates too. In this case these were age, the extent to which people think HelloFresh suited them, and whether or not participants had used HelloFresh before. Attitude towards the ad was found to have a significant effect on purchase intention $F(1, 77) = 5.46, p = .022$. Conducting a Pearson product-moment correlation coefficient analysis, it was found that there was a small, positive correlation between attitude towards the ad and purchase intentions ($r = .24, p = .027$). Therefore, $H12$, which suggests that attitude towards the ad positively affects purchase intention, was accepted.

Furthermore, attitude towards the brand also had a significant effect on purchase intention, $F(1, 77) = 7.70, p = .007$. After running a Pearson product-moment correlation coefficient analysis, results showed that the relationship between these two variables is a strong, positive one, $r = .56, p = .000$. Therefore, $H13$, which proposed that attitude towards the brand positively affects purchase intention, was also accepted.

Finally, results showed that whether participants heard a pre-, mid-, post-roll, or no ad at all, had no significant effect on purchase intention, $F(2, 77) = .95, p = .390$. $H14$ predicted

that mid-rolls would lead to better purchase intentions than post-rolls (*H14a*), and pre-rolls would result in the highest purchase intentions (*H14b*). *H14* was therefore rejected.

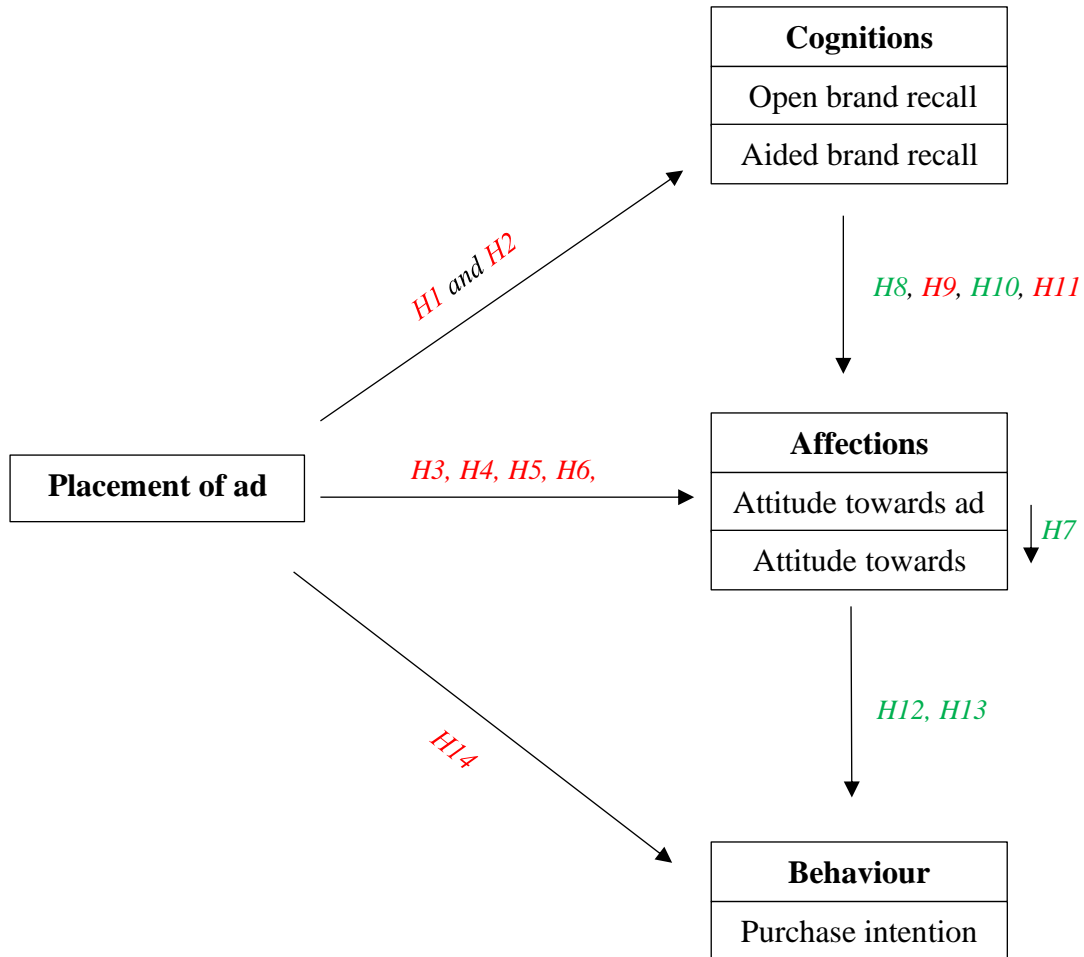


Figure 2: Conceptual model with accepted/rejected hypotheses

5. Discussion & conclusion

The amount of podcast shows available has increased extremely over the past few years (Schaffer, 2021), and more and more people are starting to add podcast listening to their daily media consumption routines (Heshmat et al., 2018). It is therefore no surprise that marketers have started to see the fruits of implementing podcast advertising to their marketing and branding strategies. Nevertheless, research on podcasting advertising is still in its infancy, and not much is known about what the best tactics actually are. This research aims to contribute to this by answering the following research question: ‘Does the placement order of advertising rolls (pre- versus mid- and post-roll) in podcast influence their effect on the cognitions, attitudes and behaviors towards the ad and brand of Dutch consumers in the age of 18 to 34?’.

Having thoroughly revised literature and compared previous research, this paper came up with fourteen hypotheses to answer the research question. Using an online experiment data was collected and results either accepted or rejected these hypotheses. When looking at the conceptual model at the end of the previous chapter, it was concluded that, contrary to what was expected, placement of advertisement rolls in podcast episodes had no effect on neither cognitions, affections, nor behaviors of consumers. However, results did partially support the hierarchical model of effects theory, as the hypotheses testing the relationships between the different steps were nearly all accepted. In the following chapter each of these hypotheses are discussed in detail, following the order of the conceptual model. Findings are linked back to previously discussed literature, together with other sources in order to find explanations for the unexpected results. Thus, first the effects of placement on cognitions are examined. Second, the effects of placement and cognitions on affections towards the advertisement are explained and thirdly this paper discusses the effects on behaviors. At the end of this chapter the limitations of this research are considered and finally practical implications for marketers and advertisers are suggested, followed by recommendations for future research.

5.1. *Effects on cognitions*

Results of the online experiment showed that, as opposed to what was expected, placement of advertisement rolls had no significant effect on brand memory. Brand memory was measured using both open recall and aided recall, and for both variables results were not significant. There could be several different reasons for this. As Edward et al. (2009) found in their study, exposure towards an advertisement does not automatically mean that a consumer’s brain will also process the message of this advertisement. In order for this to

happen, it is important that a certain amount of attention is given to this advertisement (Kuisma et al., 2010). Paying attention then allows consumers' brains to process, store and later retrieve this information (Li & Lo, 2015). There are unlimited stimuli to which attention can be given, but only limited attention which can be given to each (Simmonds et al., 2020). Therefore, the brain needs a way of selecting relevant information. This is done through selective attention where attention is paid to what is important for the task being done at that moment, while ignoring all information that is irrelevant for this task (Onișor & Ioniță, 2021). In the current study, participants were told that they were going to be asked several questions about their feelings and identification towards the hosts after listening to the excerpt. Therefore, respondents might have given as much attention as possible towards what the hosts are saying in the podcast, avoiding irrelevant information, which in this case was the HelloFresh advertisement. Research has also found that this selective attention mechanism can lead to advertisement avoidance, which has been defined as "a significant reduction of user exposure to advertising content" (Speck and Elliot, 1997). Nevertheless, a cover story was necessary to make sure that participants would not know the real purpose of the study and act a certain way accordingly. Also, in real life, people do not listen to podcasts with the goal of hearing advertisements either. Though the cover story could be a reason for insignificant results, it actually accounted for the ecological validity of the experiment.

Furthermore, previous advertising and marketing research has found that the degree of involvement that consumers feel towards the content that they are exposed to affects how much attention is paid to the information provided (Huang & Kuo, 2012). Behe et al. (2018) have defined involvement as "a person's perceived relevance of the object based on inherent interests, values or needs". In the experiment of the current research, participants were sampled through convenience and snowball sampling. They were then exposed to an excerpt of a podcast that they may or may not feel involved with. Even though the questionnaire did ask whether participants were familiar with De Zelfspodcast and how much they listened to it and liked it, level of involvement was not measured. It is therefore possible that the level of involvement, affecting how much attention was paid to the excerpt and the advertisement, may have affected the results on brand memory. This could therefore be an interesting variable to consider in further research.

Another reason for advertisement placement having no significant effect on brand memory could be the choice of the ad used. Previous studies have found that brand memory works best when the name of the brand is disclosed at the end of the advertisement (Teixeira et al., 2010). This has been explained by the peak-end rule theory, which states that stimulus

provided towards the end of an event lead to highest arousal (Chowdhury et al., 2008). In the advertisement chosen for the current study, the brand name is placed at the very beginning, as it is actually the first thing that is said. Nevertheless, literature on brand name placement in an ad is conflicting, as other research suggests that having the brand name at the beginning makes it easier for consumers to link the rest of the advertisement content to the brand (Mandler, 1984).

Sample size of the experiment could be another reason for the insignificant results. A large number of respondents were able to recall the name of the brand without any help ($n = 73$). This leaves only a very small valid sample to test aided recall ($n = 7$). Thus, having such a small sample for the analysis of aided brand recall could have led to insignificant results. However, many participants being able to recall the name of the brand goes in line with previous research which found that podcast advertising is very effective for brand recall (Kaufer, 2021). In addition, the sample size met the criteria of required sample size when conducting an online experiment (Walker, 2014).

Even though results were not significant, it is worthwhile to point out that there was a marginally significant effect of advertisement placement on open brand recall. Open recall scored best in the condition where the ad was placed at the beginning (pre-roll). Participants in the mid-roll condition were also able to recall the brand quite well, but those who heard the post-roll advertisement did much worse on open brand recall. The hypotheses of this paper suggested that mid-rolls would do best on brand memory (*H1*). This was based on the idea that consumer's attention is triggered most when they are exposed to something that they do not expect (Kahneman, 1973) and when a task is interrupted (Li and Lo, 2015). The current results do not support these theories. From a practical standpoint, an explanation for this finding could be that participants of the experiment are listening more closely and carefully when the fragment starts. However, to the best of the researcher's knowledge, there are no theories which could explain the reason for pre-rolls scoring better at open brand recall than mid-rolls. Post-rolls scoring worst on open brand recall was initially expected (*H2*) due to the fact that consumers have a certain attention span which reaches a peak during a certain activity but then decreases towards the end (Li and Lo, 2015).

5.2. Effects on affections

Contrary to what was expected, hypotheses 3, 4, 5 and 6 were all rejected. Results showed that there was no significant relationship between placement of the advertisement and affections, which in this case were attitude towards the ad and attitude towards the brand.

This was not expected since previous research found that advertisements that cause irritation may lead to a negative attitude towards the ad and thus also towards the brand (Thota & Biswas, 2009). Mid-rolls interrupt the activity of the podcast listener leading to possible irritation. It was therefore expected that mid-rolls would lead to lowest attitude towards the ad and attitude towards the brand. This was also based on a previous study by (Carlitz, 2020), who found that this was the case for mid-rolls in video streaming platforms.

One of the most logical reasons that results on affections were insignificant may be that attitudes towards a brand are formed not after hearing one single advertisement, but after the exposure of many different brand outings, through many different channels, over a period of time. It is crucial for brands to build a strong brand image when competing in competitive markets (Jeong, 2017; Ruiz-Equihua et al., 2020; Verhellen et al., 2016). Branding nowadays is more than just exposing consumers to advertisements, it is more and more about creating a whole experience around it (Santini et al., 2018). Brand experiences affect both consumers' internal responses (sensations, feelings and cognitions) and behavioral responses (Brakus et al. 2009), and Ebrahim et al. (2016) found that brand experience positively affects brand preference. With all the different types of media that consumers are exposed to nowadays, advertisers have come to realize that you cannot choose just one channel for advertising, but a whole cross-media strategy has to be decided upon (Lim et al., 2015). Cross-media has been defined as "the use of at least two media channels for marketing media products" (Wirtz, 2020, p. 219). Furthermore, previous research has also found that repetition is an important variable in the formation of attitude towards the brand (Kronrod & Huber, 2019). Repetition has been found to be an effective learning technique (Edward & David, 2009) and Lee et al. (2015) found that repetition of advertisement leads to better attitudes towards the advertisement and brand. It would therefore be interesting for further research to not use a single advertisement to measure effectiveness, but various different ones, exposing participants to them over a specific period of time, rather than all at once.

Creating a strong brand image and brand experience through the use of a wide range of advertising strategies and media outlets and repeating exposure towards consumers over a longer period of time, can lead to building a consolidated brand attitude which may be hard to affect. The brand HelloFresh is one that is extremely aware of this and acts accordingly. HelloFresh has spent a huge amount of money on their marketing strategy (Nickel, 2018) which includes a wide range of channels, which goes from influencers marketing, TV commercials, online display ads, magazine ads, and podcast advertising, to subway advertisements, direct mailings, and even knocking on people's doors (Extol, 2020). It is

therefore not strange that HelloFresh currently dominates the consumer meal-kit field (Extol, 2020), and that eight out of ten people in The Netherlands are familiar with the brand (Van Dongen, 2016). Therefore, even though participants of the survey were not asked so directly, it can be assumed that a large percentage of the respondents were already familiar with HelloFresh, and Ladeira et al. (2022) found that consumers who already know a certain brand, will form a more positive attitude towards that brand. Furthermore, research has found that attitudes are relatively consistent and constant over time (Hamidizadeh et al., 2012), therefore it is very plausible that the reason for insignificant results on cognitions is due to the strong branding of HelloFresh. Looking at what the attitudes towards HelloFresh were like in our sample, regardless of the condition they were assigned to, it was found that on average participants had a quite positive attitude towards HelloFresh.

Regarding the effects of cognitions on affections, there were several different findings. Results showed that both open and aided recall positively affect attitude towards the ad (*H8* and *H10*). These findings therefore support the hierarchy of effects model, which is based upon the assumption that consumer's go through a series of steps which in the end trigger their behaviors (Bovee et al., 1995). The first step concerns cognitions, in this case open and aided brand memory, and the second affections, in this case attitude towards the ad. Although results showed that there is a positive relationship between brand memory and attitude towards the ad, findings showed that attitude towards the brand was not affected by neither open nor aided brand recall (*H9* and *H11*). The reason for there being no effect on attitude towards the brand in this experiment could be related to what is discussed above: it takes more than a single advertisement to change a whole image a brand has created. It is assumed that after being exposed to an advertisement, consumers immediately go through a mental process where information is stored and feelings are formed (Weilbacher, 2001). This idea is originally based on a theory which was formed in the 40's: the 'magic bullet theory' (Neuman & Guggenheim, 2011). This theory suggested that every message delivered to consumers would directly reach its target, just like a bullet, meaning that every advertising message would affect consumers in an effective and immediate way (Neuman & Guggenheim, 2011). However, research later on found that this theory does not accurately explain how media works (i.e. Lubken, 2008), and that not every advertisement directly leads consumers to go through all of the stages of the hierarchy of effects model. This is because cognitions, affections, and behaviors are also formed through information which the consumer receives before and after being exposed to a specific advertisement (Weilbacher, 2001).

Finally, results showed that attitude towards the ad positively affects attitude towards the brand (*H7*). This supports previous research which shows that brand information presented in a well-liked advertisement, will eventually leading to consumer's liking the brand more (i.e. Schmuck et al., 2018). Even though accepting this hypothesis does not directly lead to an answer to the research question of this paper, it does show support that using attitude towards the ad and attitude towards as variables for measuring affections was a trustworthy decision.

5.3. Effects on behaviors

Regarding the effects on behavior, this research found that both measures for affections, attitudes towards the advertisement and towards the brand, had positive effects on behaviors (*H12* and *H13*), which was measured through purchase intention. This once again supports the hierarchy of effects model, which states that the more consumers like a brand, the more likely they are to actually buy something of that brand (Rehman et al., 2014).

Nevertheless, findings showed that there was no significant difference in purchase intention between the different conditions (*H14*). Purchase intention was therefore not affected, regardless of participant hearing a pre-, mid- or post-roll. This is also in line with findings of the effects of placement on cognitions and behaviors. *H14* proposed that pre-rolls would lead to highest purchase intentions, and post-rolls to lowest. This was based on earlier assumptions that mid-rolls would score best on brand memory, but post-rolls worst, and that pre-rolls would do best on affections whereas mid-rolls would score lowest here. Based on this, pre-rolls would do best in the last step of the hierarchy of effects model: behaviors. It is surprising that placement of advertisement had no effect on neither cognitions, affections nor behaviors. To the best of the researcher's knowing, there is no literature supporting these findings. However, hypotheses of the current research were based on previous research conducted on advertisement effectiveness in video streaming, as there is little previous research on podcast advertising. Current results could therefore indicate that podcast advertising cannot be compared to video streaming advertising and that it should be treated as a whole different medium in itself.

5.4. Limitations

There are several limitations which should be taken into account. First of all, this research chose to use an online experiment rather than an offline one in order to collect results, and there are several limitations known to occur when using this method. For

instance, researchers have no control over the situations in which participants are in when conducting the online experiments (Reips, 2000). This means that the surroundings and setting could have affected results, but there is no way for the researcher to know about this. Participants could also be doing other things while filling in the questionnaire, and the researcher has no control over this. Nevertheless, using an online experiment also has its advantages. It allows for easier and quicker data collection, as participants were most likely more willing to participate while being able to do so at the time and place which they preferred. Furthermore, online experiments have a high external validity (Crano et al., 2015), since participants can take part in their own surroundings, which are likely very similar to the ones they would be in while listening to a podcast. If the experiment were to be conducted offline, in a laboratory situation, participants would be in an unfamiliar setting, leading to low external validity (Reips, 2000). Also, conducting an experiment in a laboratory setting could lead to participants acting differently than they would normally, in order to try to please the researcher (Crano et al., 2015).

Second, the brand chosen for the advertisement, HelloFresh, is a very well-known one. A study found that eight out of ten people in The Netherlands are familiar with the brand (Van Dongen, 2016), and this was reflected in this current research as nearly half of the respondents had even used HelloFresh themselves before. When consumers are familiar with a brand, they tend to have more confidence in it, which subsequently leads to a higher attitude towards the brand (Rhee & Jung, 2019). Therefore, using the brand HelloFresh could have affected results and this limitation must be considered when generalizing to other, less familiar or unknown brands.

Another limitation of the experiment was the choice of using a very short excerpt, of two minutes, to test the effect of placement on advertising effectiveness. Two minutes of a podcast is hardly comparable to a whole episode, which in the case of De Zelfspodcast can last up to 50 minutes. It is therefore possible that there was no effect of placement, since the ratio of episode length (two minutes) and advertisement length (30 seconds) is very out of balance compared to a normal podcast episode. The distinction between the pre-, mid- and post-rolls might not have been clear enough. Nevertheless, being able to find enough respondents willing to take part in an experiment of at least an hour would be very hard to find, and as mentioned earlier, the excerpt was chosen with great care in order to best reflect a whole episode. Furthermore, participants were not able to choose the podcast nor the subject of the episode. In this particular episode the hosts talk about football and education. Some people may be more interested in these topics than others, therefore paying more

attention. A recommendation for future research would be to allow participants to choose between several different podcasts and see whether there would be an effect of ad placement on ad effectiveness then.

Finally, the choice of using convenience and snowball sampling comes with limitations too. Participants were asked to take part of this research by sending them a link through social media. They were then asked to share this link with their network too. It is therefore plausible to assume that the sample is not representative of the whole population since the researcher cannot control or retrieve who the participants are (Fricker, 2008). To avoid this limitation, random sampling would have been a better option, as each person has the same amount of chance to participate. Furthermore, this experiment should be duplicated with other samples in order to establish the validity of the results of this study. Nevertheless, using convenience and snowball sampling lowered costs, and still allowed to find an audience that matched sampling criteria.

5.5. Practical implications

This study is the first of its kind as it provides a framework for measuring podcast advertising effectiveness through the hierarchy of effects model, where all the steps leading to purchase are evaluated to test effectiveness of the ad. The main finding of this research concludes that placement of advertisement rolls in podcasts has no significant effect on the effectiveness of the advertisement. This means that no matter where an advertisement roll is placed in the episode (i.e., at the beginning, middle or end of an episode), the effectiveness of the advertisement does not change. Nevertheless, when looking at placement of ads in practice, mid-rolls tend to be more expensive for advertisers to buy, and post-rolls are cheapest (Podchaser, 2022). Therefore, this paper suggests that podcast makers should reconsider the pricing of their advertisement rolls, and make them all the same, since they have the same effect. Advertisers can use results of this study when negotiating about prices of buying ads in podcast shows.

Additionally, nowadays it is extremely hard to reach young audiences via traditional media. It is therefore important for marketers to understand how they can best use new emerging media to their advantage in order to promote their products to audiences which are hard to reach, and this research contributes to this. Even though marketers are increasingly starting to employ podcast advertising in their marketing strategies (Hunt, 2022), they are doing so without really understanding the influence of the choices they make. Measuring tools such as discount codes can be used to measure the extent to which in advertisement

leads to conversion to a certain extent, but it does not explain the underlying reasons leading to purchase. This study provides a framework for measuring effectiveness of podcast advertising, and its findings support that advertisers should invest in podcast advertising, as results showed significant relationships between cognitions and attitudes towards the brand, and affections and behaviors. This means that indeed advertising in podcast can be effective on various fronts.

5.6. Future directions

Previous to this study, there was only one other study on the effectiveness of advertisement rolls in podcasts (Ritter & Cho, 2009). Ritter and Cho (2009), however, only measure the effect of placement on perceived obtrusiveness and listener irritation. Therefore, this current study should be duplicated taking into consideration the limitations mentioned above, in order to validate its results. Furthermore, there are several logical angles for future research on advertising rolls in podcast. For example, it could be very interesting to see what results would be when using an unknown brand. As mentioned before, HelloFresh is a well-known brand which may have affected results. Even though this did increase external validity, future research can ensure this external validity by testing the hypotheses using less familiar brands. Additionally, research could be done looking at the actual content of the advertising rolls. To the best of the researchers' knowledge, there is no research yet on the effect of different kind of podcasting advertising rolls regarding their style and content. Humor has been found to lead to better advertising effectiveness (Weinberger & Gulas, 2019), but is this also true for podcast advertising rolls? Other research has found that context of an advertisement can affect effectiveness of the advertisement (Stipp, 2018), but how does this work for podcasts? Can the same roll be used for different podcasts or should rolls be written to match the style of the podcast? Furthermore, as mentioned earlier, previous literature on where in an advertisement the brand name should be placed is conflicting (e.g., Teixeira et al., 2010 and Mandler, 1984), so it could be interesting to see what works best for podcast rolls. Fully understanding every aspect of advertisement rolls in podcasting and finding out what works best and what does not can help advertisers to spend their marketing budgets in the most effective ways.

One characteristic of podcast advertising is that an episode can always be fast forwarded, meaning that consumers can skip an advertisement if they would want to. This was not the case in this experiment, as participants could only proceed to questions after the excerpt once the fragment was done playing. A recommendation for future research would be

to conduct an experiment where participants are allowed to fast-forward the piece of the podcast when exposed to it, since this is something that they could do so too in real life.

To conclude, it is undeniable that we are living in a golden age of podcasting. This relatively new medium has more consumers than ever and advertising revenues are going through the roof. Nevertheless, current literature on the medium is still in its infancy, and it is therefore crucial that as much research as possible is done on all the different forms and shapes of podcast advertising.

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7. Appendix

Appendix A: Questionnaire in Dutch

Blok – Introductie

Q1.

Beste deelnemer,

Hartelijk dank voor je deelname aan dit onderzoek. Dit onderzoek wordt uitgevoerd door een student van de masteropleiding Media & Business van de Erasmus Universiteit Rotterdam. Dit onderzoek is voor een masterscriptie en bestaat uit een online experiment waarin onderzocht zal worden in hoeverre Nederlandse jongeren zich kunnen identificeren met presentatoren van podcastseries. Je zal daarom luisteren naar een klein fragment van de Nederlandse podcast De Zelfspodcast van ongeveer 2 minuten. Daarna worden er enkele vragen over het fragment gesteld.

Houd er rekening mee dat je deelname geheel vrijwillig is, wat betekent dat je op elk moment tijdens je deelname kunt stoppen. Bovendien zal je persoonlijke informatie strikt vertrouwelijk worden behandeld en zullen de bevindingen van deze enquête uitsluitend voor onderzoeksdoeleinden worden gebruikt. Je anonimiteit is dus op elk moment gegarandeerd. Het hele onderzoek zal ongeveer 10 minuten duren. Als je tijdens of na je deelname vragen hebt, neem dan gerust contact op met de onderzoeker: 568673sa@eur.nl.

Nogmaals hartelijk dank!

Met vriendelijke groet,

Sarah

- Ik begrijp het bovenstaande en ga akkoord met de deelname aan deze enquête

Blok – Demographics

Q2. Eerst willen we je enkele algemene vragen stellen.

Q3. Wat is je geslacht?

- Man
- Vrouw
- Anders
- Wil ik liever niet zeggen

Q4. Wat is je leeftijd?

- 17 jaar of jonger
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36 of ouder

Skip to: end of survey if '17 jaar of jonger' or '36 jaar of ouder' is selected

Q5. Wat is je hoogst behaalde opleidingsniveau?

- Geen
- Basisschool
- Middelbare school
- MBO
- Hbo-bachelor
- Universitaire bachelor
- Master diploma
- PHD of hoger
- Dat zeg ik liever niet

Blok– Audio

Q6. Je gaat nu een kort fragment (ongeveer 2 minuten) horen van de Nederlandse podcast De Zelfspodcast. De Zelfspodcast is een chat-podcast waarin de presentatoren Sander en Jaap praten over hun leven en actualiteiten. We willen je vragen om het geluid van je computer of telefoon aan te zetten. Na dit fragment is het mogelijk om door te gaan naar de volgende pagina als er een pijl verschijnt. Dan zullen er vragen over de podcast worden gesteld. Neem dus alstublieft plaats en luister goed naar het podcastfragment.

Blok – Soundcheck

Q7. Pre-roll

Q8. Timer

Q9. Mid-roll

Q10. Timer

Q11. Post-roll

Q12. Timer

Q13. Control group

Q14. Timer

Q15. De volgende vragen gaan over de podcast De Zelfspodcast waarvan je net een kort fragment hebt geluisterd.

Q16. Heb je net het fragment van een podcast gehoord?

- Ja
- Nee

Skip to: end of survey if 'Nee' is selected.

Blok - Soundcheck

Q17. Waar hebben Sander en Jaap het in dit fragment over?

- Onderwijs en voetbal
- Hun liefdesleven en kinderen
- Koken en uitgaan
- Huisdieren en politiek

Skip to: end of survey if 'Onderwijs en voetbal' is NOT selected

Blok – De Zelfspodcast control questions

Q18. Voordat je dit fragment hoorde, kende je De Zelfspodcast al?

- Ja
- Nee

Skip to: end of block of 'nee' is selected

Q19. Heb je weleens eerder naar De Zelfspodcast geluisterd?

- Ja

- Nee

Skip to: end of block if 'nee' is selected

Q20. Hoe vaak luister je naar De Zelfspodcast?

- Elke week
- Elke maand
- Eens in de twee maanden
- Minder dan eens in de twee maanden

Q21. Wat vind je van De Zelfspodcast?

- Helemaal niet leuk
- Niet leuk
- Noch leuk, noch niet leuk
- Leuk
- Heel erg leuk

Blok – Cover story

Q22. De volgende vragen gaan over de presentatoren van De Zelfspodcast. Wij willen graag weten in hoeverre jij je verbonden voelt met de presentatoren Sander en Jaap. Geef aan in hoeverre je het eens bent met de volgende stellingen.

- Sander en Jaap voelen als mijn vrienden
- Ik zou Sander en Jaap graag in het echt willen ontmoeten
- Ik vergelijk mijn ideeën graag met die van Sander en Jaap
- Ik vind het fijn om de stemmen van Sander en Jaap in mijn eigen omgeving te horen
- Ik kijk er naar uit om weer een aflevering van Sander en Jaap te luisteren

5- point Likert scale (1 = sterk mee oneens, 5 = sterk mee eens)

Q23. De volgende vragen gaan over identificatie met de presentatoren van De Zelfspodcast. Geef aan in hoeverre je het eens bent met de volgende stellingen.

- Ik voel me emotioneel betrokken bij de gevoelens van Sander en Jaap

- Ik begrijp hoe Sander en Jaap handelen, denken en voelen
- Ik probeerde te denken vanuit het oogpunt van Sander en Jaap
- Ik voelde me alsof ik Sander en Jaap was
- Ik identificeerde me met Sander en Jaap

5- point Likert scale (1 = sterk mee oneens, 5 = sterk mee eens)

Blok – Manipulation check + brand memory + attitude towards ad

Q24. Hoorde je een reclame terwijl je luisterde naar het fragment van De Zelfspodcast?

- Ja
- Nee

Skip to: end of block of 'nee' is selected

Q25. Waar zat de reclame in het fragment?

- Aan het begin
- In het midden
- Aan het einde
- Weet ik niet

Q26. Voor welk merk werd er reclame gemaakt?

Q27. Ging de reclame over een maaltijdbezorgservice?

- Ja
- Nee

Q28. Welke van de volgende merken hoorde je in de reclame? Selecteer 1 antwoord.

- Crisp
- De Krat

- Flink
- HelloFresh
- Picnic
- Ik weet het niet

Q29. Geef aan wat je vindt van de HelloFresh advertentie die je zojuist gehoord hebt:

- Slecht/goed
- Onaangenaam/aangenaam
- Onsympathiek/sympathiek
- Saai/interessant
- Smakeloos/smaakvol
- Kunsteloos/kunstig

(seven-point semantic differential scale)

Blok – Attitudes towards the brand

Q30. De volgende vragen gaan over de maaltijdbezorgservice HelloFresh.

Q31. Geef aan wat je vindt van HelloFresh:

- Onaantrekkelijk/aantrekkelijk
- Slecht/goed
- Onaangenaam/aangenaam
- Ongunstig/gunstig
- Onsympathiek/sympathiek

(seven-point semantic differential scale)

Blok – Purchase intention

Q32. Geef aan hoe waarschijnlijk het is dat je een abonnement zou nemen op HelloFresh maaltijdboxen:

- Zeer onwaarschijnlijk

- Redelijk onwaarschijnlijk
- Onwaarschijnlijk
- Neutraal
- Waarschijnlijk
- Redelijk waarschijnlijk
- Zeer waarschijnlijk

Q33. Geef aan hoe waarschijnlijk het is dat je de kortingscode uit de advertentie zou gebruiken:

- Zeer onwaarschijnlijk
- Redelijk onwaarschijnlijk
- Onwaarschijnlijk
- Neutraal
- Waarschijnlijk
- Redelijk waarschijnlijk
- Zeer waarschijnlijk

Blok – Control questions

Q34. Heb je weleens eerder HelloFresh gebruikt?

- Ja
- Nee

Q35. Hoe goed vind je dat HelloFresh bij jou past?

- Heel erg slecht
- Redelijk slecht
- Neutraal
- Redelijk goed
- Heel erg goed

Q36. Hou je van koken?

- Helemaal niet

- Niet echt
- Neutraal
- Een beetje
- Heel erg

Q37. Hoe vaak kook je thuis?

- Elke dag
- Vijf of zes keer per week
- Drie of vier keer per week
- Eén of twee keer per week
- Minder dan één keer per week
- Nooit

Q38. Dit is het einde van de enquête. Heel erg bedankt voor je deelname! Mocht je nog vragen of opmerkingen hebben, laat ze dan achter in het vak hieronder. Vergeet ook niet je antwoorden op te slaan door op de pijl hieronder te klikken.

Appendix B: Questionnaire in English

Block – Introduction

Q1.

Dear participant,

Thank you for participating in this research. This research is carried out by a student of the Media & Business master programme of Erasmus University Rotterdam. This research is for a master's thesis and consists of an online experiment which will investigate to what extent Dutch youngsters can identify with hosts of podcast series. You will listen to a small excerpt of the Dutch podcast De Zelfspodcast of about 2 minutes. Afterwards you will be asked some questions about the excerpt.

Please note that your participation is completely voluntary, which means that you can stop at any time during your participation. Moreover, your personal information will be treated with strict confidentiality and the findings of this survey will be used exclusively for research purposes. Your anonymity is thus guaranteed at all times. The whole survey will take about 10 minutes. If you have any questions during or after your participation, please feel free to contact the researcher: 568673sa@eur.nl.

Thank you very much!

Kind regards,

Sarah

- I understand the above and agree to participate in this survey

Block – Demographics

Q2. First we want to ask you some general questions.

Q3. What is your gender?

- Male
- Female
- Other
- Prefer not to say

Q4. What is your age?

- 17 years or younger
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36 or older

Skip to: end of survey if '17 years or younger' or '36 years or older' is selected

Q5. What is your highest achieved level of education?

- None
- Primary school

- Secondary school
- MBO
- Hbo-bachelor
- University bachelor
- Master degree
- PHD or higher
- Prefer not to say

Block– Audio

Q6. You are now going to hear a short excerpt (about 2 minutes) from the Dutch podcast De Zelfspodcast. The Zelfspodcast is a chat-podcast in which the hosts Sander and Jaap talk about their lives and current affairs. We would like to ask you to turn on the sound of your computer or phone. Once the excerpt is done, an arrow will appear which makes it possible to continue to the next page. Then there will be questions about the podcast. So please take a seat and listen carefully to the podcast excerpt.

Block – Soundcheck

Q7. Pre-roll

Q8. Timer

Q9. Mid-roll

Q10. Timer

Q11. Post-roll

Q12. Timer

Q13. Control group

Q14. Timer

Q15. The following questions are about the podcast De Zelfspodcast of which you have just listened to a short excerpt.

Q16. Did you just hear an excerpt of a podcast?

- Yes
- No

Skip to: end of survey if 'No' is selected.

Block - Soundcheck

Q17. What are Sander and Jaap talking about in this excerpt?

- Education and football
- Their lovelife and children
- Cooking and going out
- Pets and politics

Skip to: end of survey if 'Education and football' is NOT selected

Block – De Zelfspodcast control questions

Q18. Before hearing this excerpt, did you know De Zelfspodcast?

- Yes
- No

Skip to: end of block if 'No' is selected

Q19. Have you ever listened to De Zelfspodcast before?

- Yes
- No

Skip to: end of block if 'No' is selected

Q20. How often do you listen to De Zelfspodcast?

- Every week
- Every month
- Once every two months
- Less than once every two months

Q21. What do you think of De Zelfspodcast?

- Don't like at all
- Don't like
- Neither like, nor dislike
- Like
- Like a lot

Block – Cover story

Q22. The following questions are about the hosts of De Zelfspodcast. We would like to know to what extent you feel connected to the hosts Sander and Jaap. Please indicate to what extent you agree with the following statements.

- Sander and Jaap feel as if they were my friends
- I would like to meet Sander and Jaap in real life
- I like to compare my ideas to those of Sander and Jaap
- I like to hear the voices of Sander and Jaap in my own surroundings
- I look forwards to listening to another episode of Sander and Jaap

5- point Likert scale (1 = strongly disagree, 5 = strongly agree)

Q23. The following questions are about identification with the presenters of De Zelfspodcast. Please indicate to what extent you agree with the following statements.

- I feel emotionally involved in the feelings of Sander and Jaap
- I understand how Sander and Jaap act, think and feel
- I tried to think from Sander's and Jaap's point of view

- I felt like I were Sander and Jaap
- I identified with Sander and Jaap

5- point Likert scale (1 = strongly disagree, 5 = strongly agree)

Block – Manipulation check + brand memory + attitude towards ad

Q24. Did you hear an advertisement when listening tot he excerpt of De Zelfspodcast?

- Yes
- No

Skip to: end of block of 'no' is selected

Q25. Where in the excerpt was the advertisement?

- At the beginning
- In the middle
- At the end
- I don't know

Q26. Which brand was advertised?

Q27. Was the advertisement about a mealkit deliveryservice?

- Yes
- No

Q28. Which of the following brands did you hear in the advertisement? Select 1 answer.

- Crisp
- De Krat
- Flink
- HelloFresh

- Picnic
- I don't know

Q29. Tell us what you think of the HelloFresh advertisement you just heard:

- Bad/good
- Unpleasant/pleasant
- Unlikeable/likeable
- Boring/interesting
- Tasteless/tasteful
- Artless/artful

(seven-point semantic differential scale)

Block – Attitudes towards the brand

Q30. The following questions are about mealkit delivery service HelloFresh.

Q31. Tell us what you think about HelloFresh:

- Bad/good
- Unpleasant/pleasant
- Unfavorable/favorable
- Boring/interesting
- Unlikeable/likeable

(seven-point semantic differential scale)

Block – Purchase intention

Q32. Indicate how likely it is that you would subscribe to HelloFresh meal boxes:

- Very unlikely
- Fairly unlikely
- Unlikely
- Neutral

- Likely
- Fairly likely
- Very likely

Q33. Indicate how likely it is that you would use the discount code provided in the advertisement:

- Very unlikely
- Fairly unlikely
- Unlikely
- Neutral
- Likely
- Fairly likely
- Very likely

Block – Control questions

Q34. Have you ever used HelloFresh?

- Yes
- No

Q35. How well do you think HelloFresh suits you?

- Very bad
- Bad
- Neutral
- Good
- Very good

Q36. Do you like cooking?

- Not at all
- Not really
- Neutral
- A bit

- A lot

Q37. How often do you cook at home?

- Every day
- Five or six times a week
- Three or four times a week
- Once or twice a week
- Less than once a week
- Never

Q38. This is the end of the survey. Thank you very much for your participation! If you have any questions or comments, please leave them in the box below. Also, don't forget to save your answers by clicking on the arrow below.