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The Effect of Model Age in Advertising on Perceived Brand Authenticity and Brand Attitude: The Mediating Role of Attitude toward the Advertisement

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Abstract

As populations continue to age, the representation of older adults in advertising has become an increasingly important topic within marketing research. Previous research on whether the age of the advertising model influences brand outcomes has consecutively provided empirical findings that remain inconsistent. Little is also known about the psychological mechanisms underlying these effects. This thesis investigates whether the age of the model featured in the advertisement influences consumers' attitudes toward the advertisement (A_{Ad}), perceived brand authenticity (PBA), or brand attitude (BA), while examining A_{Ad} as a potential mediating mechanism.

The study conducted a between-subjects online experiment ($n = 163$), in which participants were randomly assigned to view one of two advertisements featuring either a younger or an older model. To guarantee the isolated effect of model age, all other advertisement characteristics were held constant, and a fictitious coffee brand was employed to eliminate the influence of pre-existing brand perceptions.

The results showed no support for the proposed conceptual model. Model age had no significant effect on attitude toward the advertisement, perceived brand authenticity, or brand attitude, and therefore no mediating effect of attitude toward the advertisement was observed. However, attitude toward the advertisement significantly predicted both perceived brand authenticity and brand attitude. The findings indicate that consumers do not base their evaluations of a brand or advertisement solely on the age of the advertising model. Additionally, they contribute to the literature on age representation in advertising by providing new insights into consumers' evaluations of younger and older advertising models.

Keywords: age representation, advertising, model age, attitude toward the advertisement, perceived brand authenticity, brand attitude

Abstract (Deutsch)

Angeichts der fortschreitenden Alterung der Bevölkerung ist die Darstellung älterer Menschen in der Werbung zu einem immer wichtigeren Thema in der Marktforschung geworden. Bisherige Untersuchungen dazu, ob das Alter des Werbemodells die Markenergebnisse beeinflusst, haben nacheinander empirische Ergebnisse geliefert, die nach wie vor uneinheitlich sind. Auch über die psychologischen Mechanismen, die diesen Effekten zugrunde liegen, ist nur wenig bekannt. Diese Arbeit untersucht, ob das Alter des in der Werbung dargestellten Modells die Einstellung der Verbraucher gegenüber der Werbung (A_{Ad}), die wahrgenommene Markenauthentizität (PBA) oder die Markeneinstellung (BA) beeinflusst, wobei die A_{Ad} als potenzieller Mediationsmechanismus untersucht wird.

Im Rahmen der Studie wurde ein Online-Experiment mit Probandengruppen ($n = 163$) durchgeführt, bei dem die Teilnehmer nach dem Zufallsprinzip einer von zwei Werbungen zugewiesen wurden, in denen entweder ein jüngeres oder ein älteres Model zu sehen war. Um den isolierten Effekt des Modelalters zu gewährleisten, wurden alle anderen Merkmale der Werbung konstant gehalten, und es wurde eine fiktive Kaffeemarke verwendet, um den Einfluss bereits bestehender Markenwahrnehmungen auszuschließen.

Die Ergebnisse lieferten keine Belege für das vorgeschlagene konzeptionelle Modell. Das Modelalter hatte keinen signifikanten Einfluss auf die Einstellung zur Werbung, die wahrgenommene Markenauthentizität oder die Markeneinstellung, und daher wurde auch kein vermittelnder Effekt der Einstellung zur Werbung beobachtet. Die Einstellung zur Werbung sagte jedoch sowohl die wahrgenommene Markenauthentizität als auch die Markeneinstellung signifikant voraus. Die Ergebnisse deuten darauf hin, dass Verbraucher ihre Bewertungen einer Marke oder einer Werbung nicht ausschließlich auf das Alter des Werbemodells stützen. Darüber hinaus leisten sie einen Beitrag zur Literatur über die Altersdarstellung in der Werbung, indem sie neue Einblicke in die Bewertungen jüngerer und älterer Werbemodells durch die Verbraucher liefern.

Schlüsselwörter: Altersdarstellung, Werbung, Alter des Werbemodells, Einstellung zur Werbung, wahrgenommene Markenauthentizität, Markeneinstellung

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List of Abbreviations

A_{Ad}	Attitude toward the Advertisement
α	Cronbach's Alpha
BA	Brand Attitude (Attitude toward the brand)
B	Unstandardized Regression Coefficient
β	Standardized Regression Coefficient
BootCI / BootLLCI / BootULCI	Bootstrap Confidence Interval (Lower / Upper Limit)
BootSE	Bootstrap Standard Error
CI	Confidence Interval
df	Degrees of Freedom
F	F-statistic
H	Hypothesis
M	Mean
MSE	Mean Squared Error
N	Sample Size
OLS	Ordinary Least Squares
p	p-value (Probability Value)
PBA	Perceived Brand Authenticity
R^2	Coefficient of Determination
SD	Standard Deviation
SE	Standard Error
t	t-statistic

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1. Introduction

Advertising has long been recognized as one of the most influential forms of marketing communication, shaping not only consumers' evaluations of products and brands but also broader societal perceptions and norms (Zhang et al., 2006). As consumer markets worldwide have become increasingly diverse and populations continue to age, questions surrounding the representation of different social groups in advertising have received growing attention from researchers (Carrigan & Szmigin, 2000; Drolet & Yoon, 2020; Zhang et al., 2006). Diversity initiatives in the past, however, have traditionally mainly focused on characteristics such as gender, ethnicity, and body diversity, while age representation, a characteristic of equal importance, has received comparatively little attention until now (Campbell et al., 2025; Eisend et al., 2023).

The growing relevance of age representation is closely linked to the ongoing worldwide demographic change. Across many countries, older adults represent one of the fastest-growing consumer segments, with considerable purchasing power and therefore have gained a large and important share of the marketplace (Bristol, 1996; Carrigan & Szmigin, 2000; Drolet & Yoon, 2020). For this reason, understanding how consumers respond to the portrayal of different age groups, specifically older models, has become an increasingly important issue for advertising research. Up until now, previous studies have consistently reported that older adults remain underrepresented in advertising relative to their proportion of the population (Bristol, 1996; Carrigan & Szmigin, 1998, 2000; Chevalier & Lichtlé, 2012; Williams et al., 2010; Zhang et al., 2006). Moreover, when older models are included, they are frequently portrayed through either stereotypical roles and age-related characteristics, or in limited and smaller roles (Rosenthal et al., 2021; Williams et al., 2010; Ylänne, 2021). Given advertising's ability to shape both consumer perceptions and societal understandings of ageing, these portrayals raise important questions regarding the effects that model age may have on consumers' evaluations of advertisements or the brands they promote (Chevalier & Lichtlé, 2012; Zhang et al., 2006).

Despite the steadily growing interest in age representation, several important research gaps remain. Existing research has primarily focused on the portrayal of older adults in advertising, the existence of age-related stereotypes, and consumers' responses to these portrayals, while especially focusing on older consumer segments (Carrigan & Szmigin, 2000; Chevalier & Lichtlé, 2012; Zhang et al., 2006). Comparatively little attention has been dedicated to understanding how younger consumers, the consumers of the future, evaluate

advertisements featuring both younger and older models. Although previous studies have demonstrated that model age influences consumer responses, empirical findings have remained inconsistent. Some studies have reported more favorable evaluations of younger models, whereas others showed more positive evaluations of older models, and some revealed no significant differences between the two types at all (Bristol, 1996; Drolet & Yoon, 2020; Greco et al., 1997; Mazis et al., 1992; Mohan et al., 2022). These mixed findings suggest that the relationship between model age and consumer evaluations is much more complex than previously assumed and thus highlight the need to examine not only whether model age influences brand evaluations, but also the psychological mechanism through which these effects may occur.

To address these research gaps, the present study examines how the age of advertising models influences consumers' evaluations of advertisements and brands. More specifically, it investigates two distinct brand-related outcomes, namely perceived brand authenticity and brand attitude, while examining attitude toward the advertisement as the underlying psychological mechanism through which these effects occur. Although attitude toward the advertisement has long been recognized as a central indicator of advertising effectiveness and a determinant of brand evaluations (Brown & Stayman, 1992; MacKenzie et al., 1986; Mitchell & Olson, 1981), its mediating role in explaining the relationship between model age and the two brand outcomes has not yet been studied. Based on these gaps, this study proposes the following research question:

“How does the age of a model used in advertising influence consumers' attitudes toward the advertisement, perceived brand authenticity, and brand attitude?”

To answer the proposed research question, this study employs a between-subjects online experiment in which participants were randomly assigned to one of two advertising stimuli, featuring either a younger or an older model. To isolate the effect of model age, both advertisement stimuli were designed to look identical in terms of product, advertising context, the model's clothing, facial expressions, and poses. The only factor that differed was the age of the depicted model. Additionally, a fictitious brand was used to minimize the influence of pre-existing brand attitudes and ensure that the evaluations of participants were based solely on the experimental manipulation. This well-established research design enables the examination of both the direct effects of model age on perceived brand authenticity (PBA) and

brand attitude (BA), as well as the indirect effects through attitude toward the advertisement (A_{Ad}).

This research contributes to existing literature by extending the research on age representation in advertising by examining the evaluations of advertisements and brands of younger consumers when exposed to younger and older models. It also contributes to advertising and branding research by assessing perceived brand authenticity and brand attitude as two distinct outcomes of model age. By doing so, it is capable of providing a more comprehensive understanding of how age cues influence brand evaluations. Finally, the study offers further insight into the psychological process of how model age may influence consumer responses, through investigating attitude toward the advertisement as a mediator of the relationship. From a practical perspective, these findings will provide advertisers and brand managers with a better understanding of how model age shapes consumers' evaluations of advertisements and brands and offer them support in making more informed decisions regarding the use of age-diverse models in advertising campaigns.

The remaining thesis is organized into six chapters. Following this introduction, Chapter 2 reviews the relevant literature and develops the theoretical framework and research hypotheses. Chapter 3 outlines the research methodology, while Chapter 4 presents the empirical results. Chapter 5 discusses the results, considers their theoretical and managerial implications, and addresses the study's limitations and suggestions for future research opportunities. The thesis then concludes with Chapter 6, which summarizes the main findings and contributions of the study.

2. Theoretical Background

2.1 Age Representation in Advertising

Advertising not only promotes products, brands, and services, but also shapes societal perceptions and attitudes towards social groups, ages, genders, or other factors, through images portrayed of them by advertisements (Zhang et al., 2006). Similarly, Carrigan and Szmigin (1998) and Yläne (2021), suggest that media representation assists the formation of age-related stereotypes. These three studies emphasize the important role that advertising plays in constructing social understanding of ageing. Resulting in a greater need to acknowledge the representation of older generations in advertising.

This growing interest is closely linked to global demographic changes. As populations continue to age worldwide, older adults have become an increasingly important consumer segment (Carrigan & Szmigin, 2000; Drolet & Yoon, 2020; Zhang et al., 2006). Several studies have shown that within the next few decades, the senior population will constitute a rapidly growing share of the world's population, resulting in a shrinking labor force and a rising median age (Bristol, 1996; Carrigan & Szmigin, 1998; Drolet & Yoon, 2020; Zhang et al., 2006). Not only will this age shift have significant economic repercussions, but it will also lead to societal concerns (Drolet & Yoon, 2020). This is largely because older consumers represent one of the wealthiest and fastest-growing market segments, which simply cannot be overlooked by marketers (Bristol, 1996; Drolet & Yoon, 2020). Therefore, it is crucial to understand and correctly target older consumers.

Older customers are increasing in number and spending power, yet they remain underrepresented in the advertising literature and practice. Existing literature has revealed little on how older consumers are perceived in advertisements, and often reported that they remain underrepresented in advertisements compared to their share of the population (Chevalier & Lichtlé, 2012; Williams et al., 2010). When they are portrayed in advertisements, they are often depicted in a very stereotypical manner, representing a certain elderly image (Yläne, 2021). Given the influence of advertisements and how they shape consumers' perceptions, these findings show the importance of how age functions in advertising and how the age of models may influence consumers' brand behaviors.

2.1.1 Age as a Marketing Cue

Age plays a vital role as a marketing cue within advertisements. Drawing on McCracken's (1989) Meaning Transfer Model, it can be inferred that advertisement endorsers do not merely

promote products but also convey symbolic meanings. In advertising, models serve as a vehicle through which the cultural meanings move from the model to the product and from the product to the consumer (McCracken, 1989). This means that symbolic and cultural meanings such as the model's gender, age, lifestyle, and much more can be transferred onto consumer goods. Therefore, factors such as the model's age may influence how consumers perceive a certain advertisement or brand.

Building on McCracken's (1989) Meaning Transfer Model, Huber et al. (2013) argue that symbolic meaning can be transferred through the endorser to the brand through a process known as association transfer. According to the authors, consumers develop their perceptions of brands based on the endorsers' characteristics. Meaning that the characteristics of the endorser, such as age, affect the way brands are perceived. Huber et al. (2013) further suggest that endorsers' age can effectively influence consumers' perceptions of brand age and personality, as age-related characteristics of the model can be transferred to the brand. However, how this transfer affects the brand depends on the consumer's existing mental images and stereotypes of the typical brand user. As a result, age-related associations activated through the models' age in advertisements can shape how brands are perceived and evaluated by consumers.

The reason a model's age can influence consumers' perceptions lies in the stereotypes commonly associated with the group. Past studies have shown that different age groups induce different associations that shape consumer evaluations. Older models, for example, are commonly associated with a higher level of wisdom and credibility (Bristol, 1996; Milliman & Erffmeyer, 1989; Rosenthal et al., 2021), as they are believed to have experienced more. Whereas younger models are often seen as healthy, energetic, and willing to learn (Bowen et al., 2020). Stereotypes, as such, act as heuristic cues for consumers and thus influence their perceptions of brands (Huber et al., 2013). As a result, the age of the advertising model cannot only be interpreted as a demographic characteristic but also as a signal for specific brand and product personality attributes.

Although age stereotypes provide consumers with general expectations, the strength of their influence may depend on how closely consumers identify with the advertising model. This aligns with Bristol's (1996) similarity theory, which holds that consumers are more likely to identify with and be persuaded by advertising endorsers perceived as similar to themselves. This perceived similarity may stem from observable characteristics or personality cues, such as perceived age, and therefore foster greater identification with the endorser. Accordingly, Bristol's (1996) theory suggests that older adults are more likely to identify with older endorsers, whereas younger adults are expected to identify more with younger endorsers.

However, several studies have shown that it is important to differentiate between older adults' subjective and chronological age, as older adults tend to perceive themselves as younger than their actual age and therefore often identify more closely with middle-aged models than with older models (Bristol, 1996; Chevalier & Lichtlé, 2012). Taken together, these findings suggest that the effectiveness of the advertising model is influenced not only by its chronological age but also by consumers' age-related perceptions of themselves and the model, as well as the extent to which they identify with the endorser. Based on these findings, age should be viewed as a meaningful marketing cue that has the potential to shape consumers' attitudes toward advertisements and brands.

2.1.2 Representation of Older Adults in Advertising

Despite their growing demographic importance, older adults remain widely underrepresented in advertising, in relation to their growing proportion of the world's population (Carrigan & Szmigin, 1998, 2000; Chevalier & Lichtlé, 2012; Lynn & Simcock, 2006; Rosenthal et al., 2021; Zhang et al., 2006). The advertising industry frequently overlooks them, and they are seldom shown in advertisements (Chevalier & Lichtlé, 2012). This virtual invisibility has resulted in what Carrigan and Szmigin (2000) refer to as "discrimination by omission". This level of underrepresentation of elderly people in advertising has led to advertisers being heavily criticized in the past (Greco, 1989a), as stereotypical and unrealistic portrayals of this age population have attracted considerable criticism (Carrigan & Szmigin, 1998). Furthermore, previous research has shown that advertisers frequently use younger models, even when the marketing products are primarily intended for older consumers (Carrigan & Szmigin, 1998). When older adults are included in advertisements, then mainly because they are directly targeted and even then only in minor and background roles, for specific product categories and through stereotypical portrayals (Zhang et al., 2006). In particular, elderly women remain especially underrepresented in advertisements (Lynn & Simcock, 2006; Zhang et al., 2006). The persistence of this underrepresentation raises the question as to why advertisers continue to portray older models so infrequently despite their growing demographic and economic importance.

Several studies have observed strong hesitancy and fear from marketers to promote specific product categories using older models, especially when promoting products intended to target multiple age groups (Greco et al., 1997; Lynn & Simcock, 2006). This underrepresentation is often caused not by the unsuitability of the older model in the

advertisement, but by stereotypical preconceptions of advertisers (Carrigan & Szmigin, 2000). One explanation for this underrepresentation is that advertisements are predominantly created by younger advertising professionals, who often lack interest or struggle to identify with older consumers (Carrigan & Szmigin, 1998). As a result, their perceptions of the elderly mainly stem from age-related stereotypes rather than an accurate image of the consumer group (Carrigan & Szmigin, 1998; Long, 1998). Furthermore, Long's (1998) research suggests that although advertisers recognized the commercial importance of older consumers, they remained unwilling to identify with or relate to this age group. This unwillingness may stem from advertisers' stereotypical perceptions that older adults are less appealing and suitable than their younger counterparts (Chevalier & Lichtlé, 2012). Nevertheless, not all evidence points to negative attitudes within the advertising industry. A study on advertising executives conducted by Greco (1988), revealed that most respondents considered older spokespersons to be effective endorsers and believed that senior adults should be featured more frequently in advertisements, as they observed increasing client interest in advertisements including older models. This collection of studies has shown that although the awareness of the commercial value of older consumers in the advertising industry has increased, the model age underrepresentation is mainly caused by stereotypical beliefs and long-established practices within the industry.

Beyond their limited representation in advertisements, older adults often remain portrayed very distinctly through stereotypical characteristics or roles (Williams et al., 2010). Advertising commonly relies on stereotypes to create easily recognizable and memorable characters that can serve as effective communication tools (Machado & Sousa, 2019). Existing research has shown that older adults are associated with both positive and negative stereotypes. On the one hand, older people are often portrayed as helpless, sick, and frail, while often experiencing either a decline in their physical or cognitive abilities (Chevalier & Lichtlé, 2012; Rosenthal et al., 2021; Zhang et al., 2006). On the other hand, advertisements also depict older adults as wise, kind, more credible, and financially prosperous (Rosenthal et al., 2021; Zhang et al., 2006). Although some of these portrayals are not intended to be negative, these positive stereotypical representations still simplify the complexity of heterogeneity within the older adulthood by reducing individuals to a limited set of age-related characteristics, despite them representing a highly diverse population (Chevalier & Lichtlé, 2012; Rosenthal et al., 2021).

Furthermore, research suggests that the issues extend beyond stereotypes, as even these more favorable portrayals frequently position older adults in subordinate or less central roles than younger adults (Williams et al., 2010). Likewise, researchers have noticed that negative stereotypes of the elderly are quite sporadic, as advertisers give little consideration to

displaying older adults in advertisements (Lynn & Simcock, 2006). As a result, ageism in advertising is often expressed through the absence of older models in advertisements, rather than through negative stereotypes (Lynn & Simcock, 2006).

Most recent research suggests that the portrayal of older adults depends strongly on the intended target audience of the advertisement (Williams et al., 2010). Advertisements aimed at older audiences are considerably more likely to use older models than advertisements aiming to reach younger audiences (Williams et al., 2010). Nevertheless, older adults continue to be portrayed within a rather narrow range of product segments, such as retailing, food, leisure, and financial services, while remaining largely absent in other segments, such as fashion, cosmetics, and technology (Lynn & Simcock, 2006). The findings show that the visibility of older models also largely depends on the context in which products are marketed.

Beyond the context in which products are marketed, the representation of older adults relies on recurring representational patterns that have been established over time. Williams et al. (2010) identified six recurring portrayal types of older consumers in advertisements, suggesting that their representation continues to follow recurring stereotypical patterns. Similarly, Machado and Sousa (2019) argue that advertisers purposely make use of both negative and positive age-related stereotypes to enhance the effectiveness of their marketing messages. However, Williams et al. (2010) found that age-incidental advertisements, advertisements in which age was not the defining characteristic of the model, were more promising than age-exclusive advertisements, as they rely less heavily on age stereotypes. This suggests that portraying older adults as ordinary consumers rather than emphasizing their age, would lead to more realistic and less stereotypical perceptions of them in advertisements.

2.1.3 Consumer Responses to Model Age

Previous research has demonstrated that the perceived age of an advertising model can significantly influence consumers' responses to advertisements and brands. According to Chevalier and Lichtlé (2012), the age of the model plays a crucial role in advertising effectiveness, as it affects the consumer's attitudes toward the advertisement, attitudes toward the brand, and purchase intentions. In fact, the perceived age of the model has been identified as one of the most important characteristics in the success of advertising effectiveness (Milliman & Erffmeyer, 1989). However, the question of whether younger models are always more effective than older models, or whether consumers respond more favorably to models of similar age, remains an ongoing debate (Chevalier & Lichtlé, 2012). As a result, an increasing

amount of research is being conducted to identify how model age influences consumers' responses.

One explanation for the varying consumer responses to advertising models of different ages is the concept of age similarity. Previous research suggests that both younger and older consumers respond more positively to advertising models when the model's perceived age is similar to their own, as this helps them identify more closely with the model (Chevalier & Lichtlé, 2012; Greco, 1989a). Chevalier and Lichtlé (2012) found that consumers' responses depend not only on chronological age but also on subjective age, the age the individual perceives themselves to be. While older consumers often perceive themselves as younger than their actual age, younger consumers were found to identify closer to their chronological age (Chevalier & Lichtlé, 2012). Therefore, it can be assumed that younger adults identify more closely with models of similar age, and older consumers identify more closely with models of a slightly younger perceived age or a similar age. Accordingly, greater perceived age similarity has been associated with favorable attitudes toward the advertisement and brand, as well as purchase intentions (Chevalier & Lichtlé, 2012).

However, the influence of model age is not universal, as previous research suggests that its effectiveness is moderated by the product category being advertised. A study by Greco (1989a) showed that products specifically targeted at older consumers are better advertised with elderly models. This relationship, however, becomes less clear when the advertised product is not associated with a specific age group. Greco et al. (1997), for example, found that older consumers could be effectively reached through advertisements featuring either younger or older models when promoting age-neutral products. Similarly, Milliman and Erffmeyer (1989) reported no significant differences in consumers' evaluations of advertisements for an age-neutral product based on the age of the advertising model. On the contrary, Greco et al. (1997) observed a slight, although statistically insignificant, preference for younger models among younger consumers. These findings suggest that age congruence between the advertising model and the target audience becomes less important for age-neutral products, whereas matching the model's age with the target group's age appears to be more relevant for products with a clear age orientation.

Despite overall support for the influence of model age on consumer responses, empirical findings remain inconsistent. While some studies have reported that, regardless of consumers' age, younger models generate more favorable evaluations than older models (Mazis et al., 1992), others suggest that middle-aged endorsers generate the most positive brand attitudes, particularly among older consumers (Bristol, 1996). Closely related, Milliman and

Erffmeyer (1989) found that although consumers' attitudes toward the advertisement did not differ significantly by model age, middle-aged and older models appeared more credible and authentic than younger models. In contrast, other studies found no significant differences in consumers' responses to younger and older advertising models (Drolet & Yoon, 2020; Mohan et al., 2022). Overall, these inconsistent findings suggest that the influence of model age on consumer responses cannot be explained by age alone but depends on additional contextual factors, including consumers' perceptions of the advertisement itself. This belief stems from previous research, in which attitude toward the advertisement was repeatedly identified as one of the key consumer responses associated with advertising effectiveness (Chevalier & Lichtlé, 2012). Thus, a better understanding of this construct is essential for explaining how characteristics of advertising models may shape consumer evaluations of advertisements and brands. Accordingly, the next section reviews the theoretical foundations, antecedents, and consequences of advertising attitudes.

2.2 Attitude Toward the Advertisement

2.2.1 Definition and Conceptualization

Attitude toward the advertisement (A_{Ad}) has become one of the most widely studied constructs in advertising research and is widely regarded as an important measure of advertising effectiveness (Brown & Stayman, 1992; Sadasivan, 2019). The concept emerged from the recognition that consumers not only develop evaluations of the advertised brand but also form distinct evaluations of the advertisement itself. Therefore, researchers have begun to increasingly acknowledge that consumers' responses to advertisements represent an important mechanism through which advertising influences succeeding consumer evaluations and behaviors (Gresham & Shimp, 1985; MacKenzie et al., 1986; MacKenzie & Lutz, 1989).

A broadly accepted definition of attitude toward the advertisement was proposed by Lutz (1985), as cited in (MacKenzie et al., 1986, pp. 130–131), who defines A_{Ad} as a “predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a specific exposure occasion.” Numerous studies have later adopted this definition and conceptualized A_{Ad} as consumers' overall evaluation of a particular advertisement rather than of the advertised brand itself (MacKenzie et al., 1986; MacKenzie & Lutz, 1989; Sadasivan, 2019). Unlike attitudes toward the advertising in general, which are formed through multiple exposures over a longer period of time, A_{Ad} refers solely to consumers' responses toward a specific advertisement at the moment of exposure (MacKenzie & Lutz,

1989). As a result, MacKenzie & Lutz (1989) have regarded A_{Ad} as a situationally bound construct that is generated in response to a particular advertising stimulus at the moment of exposure, rather than as a stable attitude that develops over time.

Although most researchers agree on the overall definition of A_{Ad} , perspectives differ on its core essence. MacKenzie and Lutz (1989) define attitude toward the advertisement as an overall evaluative response distinct from consumers' cognitive and behavioral reactions. The authors treat these reactions as antecedents in the development of A_{Ad} (MacKenzie & Lutz, 1989). By contrast, other researchers argue that A_{Ad} encompasses both cognitive and affective dimensions. Shimp (1981), for example, distinguishes between a cognitive component, in which consumers form A_{Ad} by actively evaluating the advertisement's creative elements, and an emotional component, in which the advertisement evokes affective responses such as joy, nostalgia, or sadness without active evaluation. Similarly, MacKenzie and Lutz (1989) maintain that consumers' responses of advertisements are shaped by both affective responses and cognitive evaluations, indicating that A_{Ad} does not concern itself with only one aspect of advertising. Still, despite these theoretical disparities, earlier studies describe A_{Ad} as the overall evaluative response of consumers to a specific advertisement.

Another important conceptual distinction is between attitude toward the advertisement (A_{Ad}) and brand attitude (BA). Although the two constructs are closely related, each serves a unique evaluative purpose. A_{Ad} reflects consumers' evaluations of the advertisement itself, whereas brand attitude refers to consumers' evaluations of the advertised brand (Mitchell & Olson, 1981). The previous studies show that people are able to evaluate advertisements and brands at the same time, but these are two separate processes that have different outcomes (Andrew A. Mitchell, 1986; Shimp, 1981). This distinction has become particularly important in advertising research, as evidence increasingly suggests that consumers' evaluations of advertisements contribute independently to subsequent brand evaluations rather than merely reflecting pre-existing attitudes toward the brand (Andrew A. Mitchell, 1986; Brown & Stayman, 1992; MacKenzie et al., 1986).

Consequently, A_{Ad} has become a fundamental construct in advertising research. Rather than viewing advertising effectiveness solely through changes in brand beliefs or attitudes, contemporary advertising research recognizes A_{Ad} as an independent consumer response that offers valuable insights into consumers' immediate evaluations of advertisements (Brown & Stayman, 1992; MacKenzie & Lutz, 1989; Sadasivan, 2019). Therefore, A_{Ad} now serves as an important component in explaining advertising effectiveness.

2.2.2 Determinants of Attitude Toward the Advertisement

Previous research suggests that consumers' attitudes toward the advertisements are shaped by characteristics of the advertisement itself, the source delivering the advertising message, and the individual consumer (MacKenzie & Lutz, 1989). Rather than being determined by a single factor, A_{Ad} develops through consumers' responses to multiple advertising cues. As a result, the formation of A_{Ad} is generally regarded as a multidimensional process.

An important group of determinants relates to the characteristics of the advertisement itself. MacKenzie and Lutz (1989) identify advertisement credibility and advertisement perceptions as two key antecedents of A_{Ad} . Advertisement credibility typically refers to how truthful and believable consumers think that statements made in an advertisement are, whereas advertisement perceptions comprise consumers' evaluations of the advertisement's creative executional variables (MacKenzie & Lutz, 1989). Supporting these findings, Sadasivan (2019) found that advertising credibility, advertisement communications, and the entertainment value of the advertisement positively influence consumers' A_{Ad} . Furthermore, past research has shown that visual execution also influences evaluations of the advertisement. Mitchell (1986) found that photographs that were positively evaluated resulted in a more favorable attitude toward the advertisement, while negatively evaluated photographs resulted in less favorable evaluations. Similarly, Liu and Li (2024) show that visual design elements, such as white space and product image presentation, also influence consumers' A_{Ad} . Findings from these studies suggest that executional characteristics of the advertisement beyond the focal advertising cue can affect A_{Ad} . Therefore, when conducting research on the effect of a specific visual characteristic, such as age, all other visual factors should be controlled for within the experiment.

Besides the advertisement itself, the source of the advertising message also plays an important role in shaping A_{Ad} . MacKenzie and Lutz (1989) found that consumers' attitudes toward the advertiser are indeed a strong determinant of A_{Ad} , whereas attitudes toward the advertising in general exert only a weak or inconsistent influence. More specifically, previous research has demonstrated that source credibility is a key factor affecting consumers' A_{Ad} . Source credibility is commonly operationalized through the dimensions expertise, trustworthiness, and attractiveness (Bhatt et al., 2013). However, evidence suggests that not all of these dimensions contribute equally. Bhatt et al. (2013) discovered that endorser attractiveness significantly improved A_{Ad} , whereas expertise and trustworthiness showed no significant effect on A_{Ad} . Likewise, Reto & Adilson (2014) found that more attractive celebrity

endorsers generate more favorable attitudes toward the advertisements and that, in general, it is regarded as more profitable to use advertising models that are similar to the targeted consumer segment. Munnukka et al. (2016) made a similar discovery to the previously stated research, as they found that peer-endorser credibility consists of trustworthiness, expertise, attractiveness, and similarity, which all in turn positively affect A_{Ad} . The authors of the study furthermore demonstrated that endorser similarity becomes less influential as consumers gain experience with the advertised product. Overall, these findings suggest that consumers' identification with an endorser is particularly important when they have limited experience with the advertised product.

Finally, consumers' individual characteristics also influence the formation of A_{Ad} . MacKenzie and Lutz (1989) identify consumers' mood during advertisement exposure as the fifth and final affective antecedent of A_{Ad} in their A_{Ad} antecedent framework, which builds on their 1983 study (Lutz et al., 1983). Related to this concept, Raziq et al. (2018) found that advertising skepticism reduces consumers' confidence in advertising claims, decreases advertisement believability, and leads to less favorable attitudes toward the advertisements. As such, they discovered that greater confidence in the accuracy of the advertising claims contributes to more positive advertisement assessments (Raziq et al., 2018). Consumers' cognitive characteristics likewise affect A_{Ad} (MacKenzie & Lutz, 1989; Shimp, 1981). Individuals with a high need for cognition tend to respond more optimistically toward the advertisement if they perceive the claims to be relevant and credible, and less favorably when claims appear overstated or when they are not familiar with the brand (Raziq et al., 2018). In addition, Shahriari et al. (2023) discovered that the relationship between advertisement comprehension and A_{Ad} often depends on consumers' cultural characteristics. Therefore, only under certain conditions did better comprehension result in more favorable attitudes. Together, these findings indicate that consumers do not uniformly respond to advertising stimuli, but that several individual factors, such as affective states, beliefs, and information processing, influence their evaluations.

Overall, research on A_{Ad} has shown that it is shaped by a combination of advertisement-related, source-related, and consumer-related factors. Advertisement credibility, advertisement design characteristics, source credibility, and consumers' individual predispositions each influence the formation of A_{Ad} (Bhatt et al., 2013; MacKenzie et al., 1986; Munnukka et al., 2016; Raziq et al., 2018; Sadasivan, 2019).

2.2.3 Effects on Consumer Responses

Attitude toward the advertisement has been widely recognized as an important outcome of advertising exposure because it influences subsequent consumer responses. Early research proposed that A_{Ad} functions as a mediating variable through which advertising affects consumers' evaluations of brands and their behavioral intentions (MacKenzie et al., 1986; Shimp, 1981). Since then, numerous studies have confirmed its central role in explaining advertising effectiveness (Brown & Stayman, 1992).

One of the most frequently examined consequences of A_{Ad} is its influence on attitude toward the brand (brand attitude). According to the Affect Transfer Hypothesis, positive feelings toward an advertisement are transferred directly to the advertised brand, resulting in more favorable brand evaluations (MacKenzie et al., 1986). Evidence from empirical research consistently supports a positive relationship between A_{Ad} and BA (Gresham & Shimp, 1985; MacKenzie & Lutz, 1989; Mitchell & Olson, 1981; Shimp, 1981). For example, Gresham and Shimp (1985) found that affect-generated television commercials positively influence consumers' attitudes toward the advertised brands. Similarly, Mitchell (1986) discovered that consumers' responses to advertisements and their product attribute beliefs independently contributed to the formation of brand attitudes. These findings suggest that favorable evaluations of the advertisement lead to favorable evaluations of the advertised brand.

Even though the direct relationship between A_{Ad} and BA has been established, previous research indicates that this relationship is often more complex. The Dual Mediation Hypothesis proposes that A_{Ad} affects brand attitude both directly and indirectly through its influence on brand cognitions (MacKenzie et al., 1986). Brown and Stayman's (1992) meta-analysis provides strong support for this framework, as it shows that the indirect pathway through brand cognitions is especially important. Furthermore, their findings have demonstrated that A_{Ad} is strongly associated with several downstream outcomes, including brand-related cognitions, brand attitude, and purchase intentions.

As a result, beyond its influence on brand attitude, A_{Ad} also contributes to consumers' behavioral intentions. Here, Shimp (1981) argues that creating favorable attitudes toward an advertisement can ultimately influence brand choice. Closely related to this finding, MacKenzie et al. (1986) identified purchase intention as one of the key outcomes affected by A_{Ad} . Several other studies analyzed within the meta-analysis of Brown and Stayman (1992) have also reported a significant positive relationship between A_{Ad} and purchase intentions.

These discoveries indicate that consumers who evaluate an advertisement more positively are generally more likely to develop favorable behavioral intentions toward the advertised brand.

More recent studies further confirm the mediating role of A_{Ad} in advertising effectiveness. Reto and Adilson (2014), for example, found that A_{Ad} fully mediates the relationship between celebrity endorser attractiveness and brand attitudes. Shahriari et al. (2023) discovered that A_{Ad} mediates the relationship between advertisement comprehension and brand attitude. Moreover, Raziq (2018) found that attitude toward the advertisements forms part of a sequential mediation process through which brand image and advertisement believability influence brand attitude. Together, these findings demonstrate that A_{Ad} represents a central mechanism through which different advertising characteristics affect consumers' evaluations of the brand.

In summary, several empirical studies have consistently identified attitude toward the advertisement as a key determinant of advertising effectiveness. It has become an important mechanism through which advertising shapes consumer responses by influencing brand cognitions, brand attitudes, purchase intentions, and brand choice (Brown & Stayman, 1992; MacKenzie et al., 1986; Shimp, 1981). While previous research has primarily examined these established advertising outcomes, consumers' responses to an advertisement may also extend to broader evaluations of the advertised brand. As this chapter has shown, advertisements communicate various cues that shape brand-related judgments. Therefore, favorable attitudes toward the advertisement may contribute not only to consumers' brand attitudes but also perceptions of the brand's authenticity. Consequently, both perceived brand authenticity and brand attitude represent central consumer evaluations that are likely to be shaped by advertising cues, such as model age, and by attitudes toward the advertisement. Hence, the following section will first introduce the concept of perceived brand authenticity before the literature review returns to focus on brand attitude.

2.3 Perceived Brand Authenticity

2.3.1 Definition and Conceptualization

As discussed in the previous chapter, consumers' attitudes play an important role in shaping subsequent brand evaluations. Among these evaluations, perceived brand authenticity (PBA) has received increasing attention in branding research and is now regarded as an important asset in marketing and for brands (Campagna et al., 2023; Napoli et al., 2014; Södergren, 2021). The reasoning behind its growing importance can be attributed to the growing complexity of

the marketplace, which has led to increased consumer access to brand information and rising expectations for transparency, further strengthening consumers' demand for brands perceived as genuine and trustworthy (Campagna et al., 2023; Fritz et al., 2017). As a result, brand authenticity has become a central construct within contemporary branding research and is increasingly regarded as a key determinant of consumer responses toward brands.

Despite its growing importance, no universally accepted definition of brand authenticity currently exists (Bruhn et al., 2012; Ilicic et al., 2012). Instead, researchers have proposed various conceptualizations and measurement approaches, reflecting the construct's complexity (Bruhn et al., 2012; Campagna et al., 2023; Morhart et al., 2015; Napoli et al., 2014). Nonetheless, the existing literature shares the understanding that brand authenticity is not an objective characteristic inherent to a brand. Rather, it reflects consumers' subjective perceptions and evaluations of a brand's genuineness and the extent to which it remains true to itself (Bruhn et al., 2012; Napoli et al., 2014). Consequently, perceptions of authenticity are not determined solely by the brand itself but also by how consumers interpret and evaluate cues communicated by the brand, based on their own experiences, beliefs, and expectations.

As research on brand authenticity has progressed over the years, scholars have increasingly acknowledged that the construct cannot be captured by a single characteristic. Instead, authenticity is understood as a multidimensional consumer perception composed of several complementary aspects (Morhart et al., 2015; Moulard et al., 2021). Thus, several multidimensional frameworks have been developed to conceptualize and measure brand authenticity. These frameworks frequently differ in terminology and dimensional structure; however, they show considerable conceptual overlap. For instance, Bruhn et al. (2012) defined brand authenticity through the dimensions of continuity, originality, reliability, and naturalness, whereas Napoli et al. (2014) identified heritage, quality commitment, and sincerity as the core components of authenticity. In contrast, Morhart et al. (2015) proposed a four-dimensional framework consisting of continuity, credibility, integrity, and symbolism. Despite these conceptual differences, Fritz et al. (2017) concluded that the most established measurement scales from previous research consistently emphasize a brand's consistency, honesty, and genuineness, suggesting that authentic brands remain true to their core values while communicating them regularly to consumers.

Among existing definitions and conceptualizations, the framework developed by Morhart et al. (2015) is one of the most comprehensive consumer-based approaches to perceived brand authenticity. The authors define perceived brand authenticity as 'the extent to which consumers perceive a brand to be faithful and true toward itself and its consumers, and

to support consumers being true to themselves' (Morhart et al., 2015, p. 202). To operationalize this construct, they developed and validated a multidimensional measurement scale comprising four dimensions, including continuity, credibility, integrity, and symbolism. Additionally, the authors propose that consumers form authenticity perceptions based on evidence-based (indexical), impression-based (iconic), and self-referential (existential) cues communicated by the brand. This consumer-based conceptualization provides the theoretical foundation for the present study, as it defines brand authenticity as a multidimensional consumer perception that is shaped by marketing-related cues. As such, it represents a suitable framework for examining how the age of an advertising model can influence consumers' perceptions of brand authenticity.

2.3.2 Dimensions of Brand Authenticity

Although Morhart et al. (2015) conceptualize perceived brand authenticity through four dimensions, including continuity, integrity, and symbolism, not all dimensions are equally suitable for every research context. This is because the relevance of each dimension depends on the characteristics of the investigated brand and the information provided to consumers about the chosen brand. Therefore, previous research suggests that existing measurement scales need to be adapted to the specific objectives and contexts of the individual studies in which they are used (Fritz et al., 2017; Södergren, 2021).

The present study employs a fictitious brand that participants are asked to evaluate after a single exposure to an advertisement. Under these conditions, respondents cannot reasonably assess dimensions that require prior knowledge of or long-term experience with the brand. For example, the continuity dimension reflects consumers' perceptions of a brand's consistency over time and requires an established brand history or prior consumer experience with the brand (Morhart et al., 2015). Similarly, the symbolism dimension cannot be measured when employing a fictitious brand, as it captures the extent to which a brand contributes to consumers' self-expression and identity construction. It typically develops only through repeated interactions with a brand rather than a single exposure (Morhart et al., 2015). Therefore, both the dimensions of continuity and symbolism were not included in the present study.

Instead, the present study focuses on the dimensions of integrity and credibility. Unlike continuity and symbolism, both dimensions can be inferred from consumers' evaluations of the values, honesty, and trustworthiness communicated by a brand through its transferred cues (Morhart et al., 2015). This makes them particularly suitable for examining how the age of an

advertising model influences consumers' perceptions of brand authenticity after exposure to a single advertisement. Both dimensions will be discussed in greater detail in the following sections.

2.3.2.1 Integrity

Integrity is one of the four dimensions of PBA proposed by Morhart et al. (2015) and reflects the moral character of the brand. More precisely, the authors define integrity in terms of consumer evaluations of whether a brand acts according to ethical principles and demonstrates genuine care and responsibility toward its consumers. In addition, consumers' assessment of whether the brand communicates values that are consistent with its intentions plays a vital role. Accordingly, integrity signifies the moral purity and responsibility of a brand and reflects whether consumers perceive it as remaining true to the values it communicates (Morhart et al., 2015).

The importance of integrity is consistently reflected throughout the literature on brand authenticity, although different terminology is used by various authors. While Morhart et al. (2015) explicitly conceptualize integrity as an independent dimension of perceived brand authenticity, Fritz et al. (2017) identify honesty, consistency, and genuineness as the core characteristics shared across most established brand authenticity scales. Closely related, Södergren (2021) points out that brands are responsible for maintaining a certain level of integrity while avoiding excessive exploitation of consumers. Collectively, these perspectives suggest that integrity reflects consumers' evaluations of whether brands behave consistently with their communicated values and uphold their moral values and ethical standards (Fritz et al., 2017; Morhart et al., 2015; Södergren, 2021).

2.3.2.2 Credibility

Credibility represents the second dimension of PBA examined in the present study. Morhart et al. (2015) define credibility as a brand's transparency, honesty toward consumers, and its willingness and ability to fulfill its promises. Accordingly, consumers perceive authentic brands as those that consistently deliver on what they communicate and whose claims can be trusted.

Authenticity and credibility often go hand in hand, therefore this close relationship is consistently reflected throughout past literature. For example, Bruhn et al. (2012) associate authenticity with characteristics such as credibility, trustworthiness, keeping promises, and

genuineness. Similarly, Napoli et al. (2014) argue that brands perceived as less authentic are also considered less trustworthy and less credible. Nevertheless, it is important to note that credibility alone does not necessarily imply authenticity, as a brand may be perceived as credible while lacking other characteristics that contribute to an authentic brand image (Napoli et al., 2014). These findings suggest that credibility is a fundamental but insufficient component of consumers' authenticity evaluations and therefore can only serve as a dimension of the construct.

2.3.3 Consequences of Perceived Brand Authenticity

The practical relevance of PBA is reflected in its consistently demonstrated ability to influence consumers' psychological evaluations and behavioral responses. Brand authenticity is regarded as an important strategic asset in brand management, as authentic brands foster stronger consumer-brand relationships and can create value for both consumers and firms (Fritz et al., 2017; Södergren, 2021).

At a psychological level, previous research consistently shows that perceived brand authenticity positively influences a variety of consumer evaluations of brands. Authenticity has been found to improve brand attitude, strengthen perceptions of brand credibility and trust (Napoli et al., 2014), and enhance consumers' emotional attachments to the brand (Morhart et al., 2015). Additionally, Södergren (2021) found that trust and loyalty are affected by brand authenticity, and that brand authenticity increases brand equity and consumers' overall brand experience. Collectively, these findings imply that authenticity strengthens consumers' confidence in a brand while fostering more favorable overall brand evaluations (Morhart et al., 2015; Napoli et al., 2014; Södergren, 2021).

In addition to psychological effects, perceived brand authenticity also leads to more favorable behavioral outcomes. Previous studies have found positive relationships between authenticity and purchase intention (Napoli et al., 2014), brand loyalty (Södergren, 2021), positive word-of-mouth (Morhart et al., 2015), and consumers' willingness to recommend a brand to others (Morhart et al., 2015). Fritz et al. (2017) further conclude that authenticity strengthens the overall consumer-brand relationship, increasing consumers' willingness to forgive negative brand experiences and boosting brand loyalty. Taken together, this research shows that authentic brands not only generate favorable consumer evaluations but also promote long-term behavioral outcomes that strengthen consumer-brand relationships over time (Fritz et al., 2017; Morhart et al., 2015).

Recent research has further emphasized that authenticity serves as an important signal for consumers when evaluating a brand under uncertain conditions or with limited brand knowledge (Bruhn et al., 2012). Moulard et al. (2016), as discussed in Södergren (2021), demonstrate that consumers use a brand's perceived authenticity to gauge expected quality, thereby proposing a positive relationship between brand authenticity and expected quality. These observations demonstrate that authenticity influences not only consumers' emotional judgments and behavior, but also assists them in which expectations to develop about the brand in situations when they are not certain or when they don't have much information (Bruhn et al., 2012; Moulard et al., 2021; Södergren, 2021).

In light of these findings, an important question for both researchers and practitioners is not whether perceived brand authenticity matters, but rather which advertising cues contribute to its formation. Although previous research has consistently demonstrated the benefits of brand authenticity, comprehensive reviews of this research have revealed that comparatively little attention has been devoted to identifying marketing-related factors that shape consumers' authenticity perceptions, particularly within advertising contexts (Campagna et al., 2023; Södergren, 2021). As discussed throughout this chapter, consumers form authenticity perceptions by interpreting and evaluating cues communicated by a brand (Morhart et al., 2015). With this in mind, advertising is an important context in which such authenticity perceptions may emerge. Given the consistently reported positive relationship between perceived brand authenticity and favorable consumer evaluations, especially with brand attitude (Ewing et al., 2012; Spiggle et al., 2012), understanding how consumers evaluate brands needs to be analyzed next. Therefore, the following chapter examines the concept of brand attitude and discusses the factors that shape consumers' overall evaluations of brands.

2.4 Brand Attitude

2.4.1 Definition and Conceptualization

Brand attitude (BA) has long been recognized as a central construct in consumer behavior and advertising research for its ability to predict consumers' behavioral responses and to evaluate the effectiveness of marketing activities (Mitchell & Olson, 1981; Spears & Singh, 2004). Attitudes are generally defined as an individual's overall evaluation of an object along a scale ranging from favorable to unfavorable (Eastin & Lee, 2020), while brand attitude refers specifically to consumers' evaluations of a particular brand, as defined by Mitchell and Olson (1981, as cited in Spears & Singh, 2004). Spears and Singh (2004) further define brand attitude

as an ongoing, one-dimensional assessment of a brand that affects and directs subsequent consumer behavior. Thus, brand attitude reflects consumers' overall evaluations of a brand rather than a momentary emotional reaction or an isolated belief.

This conceptualization of brand attitude distinguishes it from related constructs such as emotions, beliefs, and behavioral intentions. Although feelings and emotions may arise when consumers are exposed to advertisements, they are often regarded as fleeting, whereas brand attitudes are comparatively durable evaluations that persist beyond a single exposure to an advertisement or a single consumption (Spears & Singh, 2004). Likewise, brand beliefs and brand attitudes are theoretically distinct constructs. Brand beliefs refer to consumers' subjective perceptions and evaluations of specific brand attributes, shaped by memory, whereas brand attitude represents the overall evaluation that results from integrating these beliefs (Mitchell & Olson, 1981). Therefore, consumers may hold multiple beliefs about a brand, yet these collectively contribute to the formation of only a single brand attitude.

Equally important is the distinction between brand attitude and behavioral intentions. While attitudes reflect consumers' evaluations of a brand, behavioral intentions describe an individual's intention to engage in a particular behavior, such as purchasing a good or service from the brand (Spears & Singh, 2004). Although these constructs are closely related, it is vital to understand their distinction. Intentions are typically considered the consequence of brand attitudes, not a component of them. As such, brand attitudes are often acknowledged to occupy an intermediate position within the consumer decision-making process, translating consumers' cognitive evaluations into behavioral tendencies (Mitchell & Olson, 1981; Spears & Singh, 2004).

Over the years, brand attitude has gained significant importance in advertising research, as it is one of the primary outcomes through which advertising can influence consumers. Previous research in this field has demonstrated that brand attitudes are formed through consumers' evaluations of advertisements, together with their brand-related beliefs (Eastin & Lee, 2020; Mitchell & Olson, 1981). As a result, brand attitude serves as a central evaluative construct within marketing communications, capturing consumers' overall perceptions of a brand and indicating advertising effectiveness.

2.4.2 Antecedents of Brand Attitude

Previous research suggests that brand attitude is not formed in isolation but develops through a combination of consumers' cognitive evaluations and affective responses to marketing

stimuli. While early research has primarily viewed brand attitude as a consequence of consumers' beliefs about a brand, later research has shown that affective responses to advertisements also play a vital role in shaping consumers' brand evaluations (Mitchell & Olson, 1981; Mittal, 1990). Accordingly, contemporary advertising research needs to consider both aspects as important antecedents of brand attitude.

Earlier definitions of brand attitude primarily focused on consumers' brand beliefs as the main determinant of brand evaluations. For example, Mitchell and Olson (1981) argue that consumers first develop subjective beliefs about a brand's attributes, which then influence their assessments of the brand. Therefore, these beliefs function as cognitive mediators through which advertising affects brand attitudes. Although brand beliefs have consistently explained a substantial proportion of the variance in brand attitude, Mitchell and Olson (1981) found that they do not fully account for advertising effects. Instead, the authors discovered that attitude toward the advertisement partially mediates advertising effects on brand attitudes, suggesting that consumers' evaluations of advertisements influence their attitude toward the brand beyond cognitive brand beliefs alone.

Building on these findings, a considerable amount of research has identified attitude toward the advertisement as an important antecedent of brand attitude. According to Eastin and Lee (2020), consumers' brand attitude directly correlates with their attitude toward the advertisement, meaning that if the advertisement is perceived positively, consumers' attitudes toward the brand are also more likely to be positive. In line with this, Gardner (1985) found that A_{Ad} contributes significantly to BA under both brand-focused and non-brand-focused evaluation conditions. This, in turn, highlights the robustness of the relationship between A_{Ad} and BA across different evaluation contexts and shows that responses toward A_{Ad} can be transferred to BA.

Several studies have proposed explanations for this relationship. MacKenzie et al.'s (1986) study tested four competing models to explain how consumer attitudes toward an advertisement influence brand attitude and purchase intention. One of the models tested was the Affect Transfer Hypothesis, which proposes that consumers directly transfer their positive or negative evaluations of the advertisement to the advertised brand. An extension of this perspective is the Dual Mediation Hypothesis, which argues that A_{Ad} influences BA through two complementary pathways. First, consumers' affective responses toward the advertisement directly influence their brand evaluations; second, these favorable evaluations positively influence consumers' perceptions and cognitions regarding the brand, resulting in a more

positive brand attitude (MacKenzie et al., 1986). The relationship between A_{Ad} and BA therefore underscores the importance of advertising attitude for brands (Eastin & Lee, 2020).

Furthermore, more recent research suggests that the influence of attitude toward the advertisement extends beyond situations in which consumers rely on peripheral processing. While earlier studies often interpreted the relationship between advertisement attitude and brand attitude as a result of peripheral persuasion, Miniard et al. (1990) demonstrated that A_{Ad} continues to significantly influence brand attitude even when consumers process advertising messages through the central route. This finding suggests that favorable evaluations of advertisements contribute to brand attitude, regardless of whether consumers rely primarily on cognitive or affective processing when evaluating messages.

Collectively, the existing literature demonstrates that brand attitude develops through the interaction of cognitive and affective mechanisms. While consumers' brand beliefs remain fundamental determinants of brand evaluations, attitude toward the advertisement provides an additional, independent pathway through which advertising shapes brand attitudes. Hence, contemporary advertising research recognizes both brand-related beliefs and consumers' affective evaluations of advertisements as central antecedents in the formation of brand attitude.

2.4.3 Consequences of Brand Attitude

Existing research consistently identifies brand attitude as an important determinant of consumers' subsequent behavioral responses. In particular, favorable brand attitudes have repeatedly been associated with stronger purchase intentions, making brand attitude an important predictor of future consumer behavior (Mitchell & Olson, 1981; Spears & Singh, 2004). Spears and Singh (2004) emphasize that while brand attitude represents consumers' overall evaluation of a brand, purchase intention reflects the subjective probability that consumers will engage in purchasing behavior. Accordingly, behavioral intentions are generally regarded as a consequence of brand attitude rather than a component of it.

Mitchell and Olson (1981) further demonstrate that although advertising influences consumers' brand attitudes through multiple mechanisms, brand attitude itself substantially mediates consumers' behavioral intentions. These findings suggest that consumers who develop more favorable evaluations of a brand are also more likely to purchase it.

Beyond predicting purchase intentions, brand attitude has become an important measure for assessing the effectiveness of marketing activities. Because of its relative durability, it enables researchers and practitioners to evaluate consumers' overall perceptions

of brands, monitor changes in evaluations over time, and assess the effectiveness of advertising campaigns (Spears & Singh, 2004). As a result, brand attitude is not only regarded as a key outcome of advertising but also, like perceived brand authenticity, as an important indicator of future consumer responses. Building on the theoretical foundations established throughout this literature review, the following chapter develops the research hypotheses proposed in the present study.

2.5 Hypothesis Development

The preceding literature review suggests that the age of an advertising model represents an important advertising cue that can influence consumers' evaluations of both advertisements and brands. However, previous empirical findings have remained inconsistent regarding whether younger or older models generate more favorable consumer responses. While some studies reported that younger models offered more advantages, others identified middle-aged or older models to offer more positive responses, and some studies reported no significant differences between model age groups (Bristol, 1996; Drolet & Yoon, 2020; Mazis et al., 1992; Milliman & Erffmeyer, 1989; Mohan et al., 2022). Building on the existing research, sufficient theoretical support exists to expect model age to have an effect on the dependent variables, however, not enough to predict the direction of the effect. Accordingly, all hypotheses in the present study are formulated as non-directional.

As established throughout the literature review Sections 2.1 and 2.3, the age of an advertising model is not merely perceived as a demographic characteristic by consumers, but rather as a meaningful marketing cue that transfers meaning about the advertised brand (Huber et al., 2013; McCracken, 1989). This theoretical mechanism is illustrated by McCracken's (1989) Meaning Transfer Model, in which characteristics of the advertising model can be transferred to the advertised brand, and then in turn shape consumers' perceptions of the advertised brand. Furthermore, Huber et al. (2013) argue that consumers form perceptions of the brand based on symbolic characteristics of the model, including age. In turn, it can be assumed that model age has the potential to influence how consumers view brand-related cues that are communicated through advertisements.

Section 2.3 of the literature review further demonstrates that perceived brand authenticity is not an objective attribute of a brand but rather a subjective consumer perception that develops through the interpretation of marketing-related cues (Bruhn et al., 2012; Morhart et al., 2015; Napoli et al., 2014). Consumers evaluate whether a brand appears genuine, honest,

and true to itself based on the information communicated during their interaction with the brand (Fritz et al., 2017; Morhart et al., 2015). Because advertising acts as one of the primary contexts in which cues from brands are communicated, and model age represents one of these cues, differences in model age are expected to influence consumers' perceptions of brand authenticity. Although the theoretical foundation presented throughout the literature review suggests this relationship between model age and perceived brand authenticity, this relationship has not been examined by previous research. Therefore, this study proposes H1, which analyses the influence of model age on perceived brand authenticity.

H1: Model age has a significant effect on perceived brand authenticity.

Previous advertising research further revealed that beyond consumers' authenticity perceptions, brand attitude functions as one of the central outcomes of advertising effectiveness (Mitchell & Olson, 1981; Spears & Singh, 2004). As discussed in Section 2.4, brand attitude reflects consumers' overall assessment of a brand and develops through both cognitive brand beliefs and affective responses to advertising (Mitchell & Olson, 1981; Mittal, 1990). Additional research, found that model age in advertisements influences consumers' evaluations of advertisements and brands, but that the direction of these effects remains inconsistent (Chevalier & Lichtlé, 2012). Because model age represents an important visual cue that can shape consumers' perceptions of the advertised brand, it is expected to also affect consumers' attitudes toward the brand. Thus, hypothesis two suggests that the age of the advertising model will influence consumers' attitudes toward a brand.

H2: Model age has a significant effect on brand attitude.

As previous research suggested, model age may directly affect consumers' evaluations of brands, literature in Section 2.2 of the literature review also proposes that advertising characteristics rarely independently affect brand evaluations (Andrew A. Mitchell, 1986; Brown & Stayman, 1992; MacKenzie et al., 1986). Instead, consumers first develop attitudes toward the advertisement itself, which then in turn influences their evaluations of the advertised brand (Brown & Stayman, 1992; MacKenzie et al., 1986). Thus, attitude toward the advertisement has become one of the most established measures of advertising effectiveness, by representing consumers' evaluations of a specific advertisement they are exposed to (MacKenzie & Lutz, 1989). In addition, prior research revealed that A_{Ad} is shaped by various advertisement characteristics, and that it functions as an important mediating mechanism

through which the exposure to a specific advertisement affects consumers' brand responses (Brown & Stayman, 1992; MacKenzie et al., 1986; Shimp, 1981).

Building on this theoretical reasoning, the literature review in Section 2.1 identified model age as a visual characteristic of an advertisement that is capable of influencing consumers' responses toward advertisements (Chevalier & Lichtlé, 2012). Correlating with this, Section 2.3 found that consumers develop their perceptions of brand authenticity through interpreting marketing-related cues that are communicated through the brand (Morhart et al., 2015). Therefore, if model age influences consumers' evaluations of an advertisement, and A_{Ad} functions as a mediating mechanism through which advertising characteristics then affect brand evaluations, it can be expected that attitude toward the advertisement explains part of the relationship between model age and perceived brand authenticity. Subsequently, the following hypothesis is proposed:

H3: Attitude toward the advertisement mediates the relationship between model age and perceived brand authenticity.

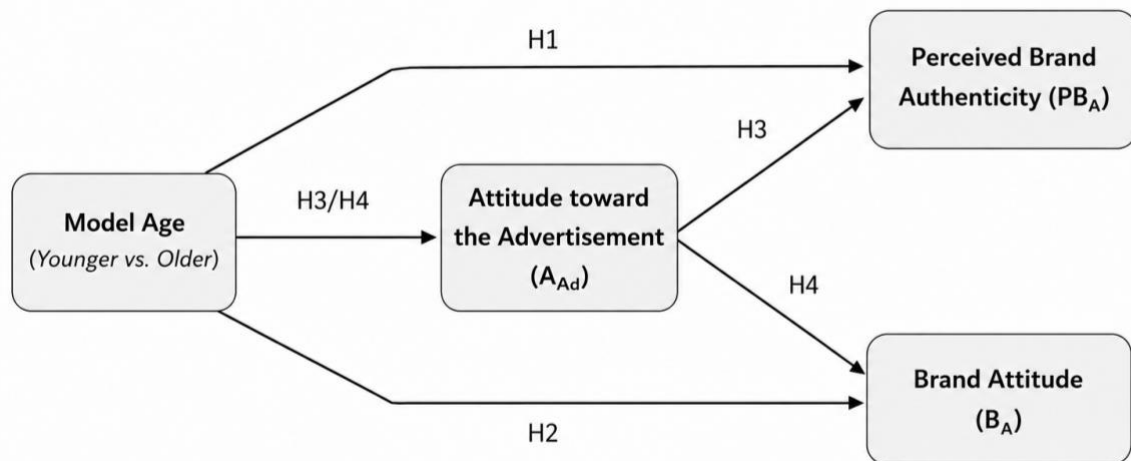
Likewise, several studies referenced in the above literature review have found that attitude toward the advertisement represents one of the strongest antecedents of brand attitude (Brown & Stayman, 1992; Eastin & Lee, 2020; Gresham & Shimp, 1985; MacKenzie et al., 1986; Mitchell & Olson, 1981; Shimp, 1981). This effect is predominantly well illustrated within the Affect Transfer Hypothesis and the Dual Mediation Hypothesis, which both suggest that consumers transfer their evaluations of an advertisement to the advertised brand, either directly or indirectly through brand-related cognitions (Brown & Stayman, 1992; MacKenzie et al., 1986). Further research revealed that consumers who evaluate advertisements more positively are also more likely to positively evaluate the advertised brand (MacKenzie et al., 1986). With this and the fact that model age influences consumers' evaluations of advertisements in mind (Chevalier & Lichtlé, 2012), attitude toward the advertisement is likewise expected to mediate the relationship between model age and brand attitude.

H4: Attitude toward the advertisement mediates the relationship between model age and brand attitude.

Figure 1 illustrates the conceptual framework underlying the present study. Model age is proposed as the independent variable, attitude toward the advertisement as a mediator, and perceived brand authenticity and brand attitude each represent a dependent variable. H1 and H2 propose the direct effects of model age on either perceived brand authenticity or brand

attitude. H3 and H4 further propose that the relationships presented in H1 and H2 are mediated through attitude toward the advertisement. Together, these four proposed hypotheses capture both the direct and indirect influence of model age on consumer evaluations.

Figure 1. Conceptual Framework. Own Illustration.¹



Note. *H1 and H2 represent the direct effects of model age on the dependent variables. H3 and H4 represent the mediating effects of attitude toward the advertisement (A_{Ad}) on the dependent variables.*

¹ Although previous research has demonstrated that perceived brand authenticity positively influences brand attitude (Ewing et al., 2012; Spiggle et al., 2012), the present study does not include this relationship as a formal hypothesis. The objective of this research is to examine the direct effects of model age on brand authenticity and brand attitude, as well as the mediating role of attitude toward the advertisement. Therefore, brand authenticity and brand attitude are treated as parallel outcome variables rather than as sequential constructs within the proposed conceptual model.

3. Methodology

3.1 Research Design

This research is aimed at investigating the impact of the model's age in advertising on the consumers' attitudes towards advertisements, brand authenticity, and brand attitude. It is also concerned with assessing whether attitude towards the advertisement mediates the effect of model age on either brand authenticity or brand attitude. To achieve this aim, a quantitative experimental research design was chosen because experiments allow researchers to investigate causal relationships by purposeful manipulation of the independent variable while controlling for potential confounding influences by holding all other variables constant (Malhotra, 2020). More precisely, a one-factor between-subjects experiment with two conditions was employed, in which participants were randomly assigned to view one of two advertisements featuring either a younger model or an older model. Each participant went through only one experimental condition, thus minimizing any carryover, learning, and comparison effects that may arise when multiple treatments are evaluated by the same individual (Charness et al., 2012). Moreover, the design of the experiment helped to reduce the chances for participants to recognize the experimental treatment thus promoting the internal validity of the study.

Within this study, the manipulation of model age in the advertisement served as the independent variable. It was manipulated into 2 separate age groups: a younger model, which depicted a female model aged around 25 years old, and an older model, which depicted a model aged around 60 years old. The main outcome variables, acting as dependent variables, of the study are brand authenticity and brand attitude. In addition, attitude toward the advertisement was proposed as a mediating variable linking model age to brand authenticity and brand attitude. Brand authenticity was conceptualized as a two-dimensional construct consisting of the dimensions credibility and integrity (Morhart et al., 2015), which were both measured separately within the reliability analysis and merged into an overall authenticity construct for the main analyses.

Data were collected online through a survey administered via SoSci Survey (see Appendix A for the full questionnaire). The survey was issued in English to ensure that participants fully understood both the stimulus and all questionnaire items. During the setup, all questions were configured as mandatory, preventing participants from advancing without providing a response. This approach helped minimize the number of item non-responses and guaranteed complete data for all measured constructs (Malhotra, 2020). At the beginning of the survey, participants were asked to read a small introduction that explained the procedure

and purpose of the survey, and that it would take about 3-5 minutes. Additionally, it was mentioned that all responses are anonymous, will be treated highly confidentially, and used exclusively for academic purposes. This page also served as informed consent, meaning that by proceeding, participants confirmed that they are between 18 and 30 years old and voluntarily participating in this study. After providing informed consent, participants were randomly assigned to one of the two experimental conditions and exposed to the corresponding advertisement stimulus. Following the advertisement exposure, respondents were asked to answer several questions measuring the main constructs of the study, complete the questions of the manipulation check, and provide demographic variables.

Convenience sampling was chosen as the primary form of data collection for this study. This frequently used non-probability sampling method was selected due to its practical advantages, including ease of access, time efficiency, and cost-effectiveness (Etikan et al., 2016). There were two ways to recruit participants for this study: through personal networks on social media (WhatsApp & Instagram), distributing a link to the survey and university campus outreach, where peer students were asked to fill out the survey by being shown with a QR Code. Data collection occurred between 21 and 29 May 2026.

For this research, a sample group of consumers aged 18 to 30 years old was selected. This age range was purposefully selected to obtain a more homogeneous sample, and thus minimize the impact of differences between advertising perceptions and evaluations that could be attributable to age (Malhotra, 2020). To account for other potential variations within the target group and to ensure that observed effects could be associated more clearly with the manipulated model age rather than with differences in respondents' own age, participant age was included as a control variable in the statistical analysis (Hayes, 2022).

3.2 Stimuli Development

To investigate the effect of model age on consumers' responses and minimize the influence of pre-existing brand perceptions, a fictitious brand was specifically developed for this study. The use of a fictitious brand minimizes the influence of participants' prior brand familiarity, brand associations, and pre-existing attitudes that could otherwise affect their evaluations (Davvetas et al., 2020; Turan, 2022). As a result, respondents' perceptions can be attributed more directly to the experimental stimulus rather than to pre-existing brand associations or perceptions, increasing the internal validity of the study (Davvetas et al., 2020).

Before developing a brand, a suitable product category had to be selected. The product category aimed to isolate the effect of model age, as this was the main objective of the study. Therefore, a product category was chosen that was not associated with a specific age group and that would appeal to a broad range of consumers. As a result, coffee was considered the appropriate choice, as it is an age-neutral fast-moving consumer good (FMCG) commonly consumed by consumers across different age groups. FMCGs are products characterized by frequent purchase, relatively low cost, and routine consumption. Selecting a broadly relevant and age-neutral product category, such as coffee, reduced the likelihood that participants' responses would be influenced by product-age-congruence rather than by the manipulated model age, thereby allowing the effects of the experimental manipulation to be examined more clearly (Eisend et al., 2023).

Taking these considerations into account, a fictitious coffee brand named NOVARA was created. The brand name was selected to avoid any resemblance to previously established coffee brands and minimize potential brand-related biases. To further emphasize that NOVARA is a coffee brand, a red coffee bean was selected to be placed next to the brand's name as part of the brand logo. The red coffee bean was also developed to establish a recognizable visual brand identity.

Following the development of the fictitious brand, the experimental advertisements were created. To ensure a realistic look, consumer perception, and ecological validity of the advertisements, several existing coffee brand advertisements were reviewed during the development process. During the scouting process, recurring design elements and visual codes that were commonly used within coffee advertising were noted. The most noticeable recurring characteristics included a prominently displayed brand name, a visual brand symbol, a clear and concise brand slogan, and a smiling model at the center of the advertisement. Oftentimes, the model would also hold a coffee mug in their hand.

Based on these observations, two advertisements were developed for this study. Both advertisements made sure to feature the brand name "NOVARA" with the red coffee bean next to it at the bottom center of the advertisement. In the top right corner of the advertisement, the brand slogan "Make your world better" was placed to ensure a more distinct portrayal of an advertisement. The background of the image remained blurry, ensuring that consumers' attention would remain focused on the model and brand.

At the center of the advertisement, a female model is displayed wearing a black V-neck T-shirt and some minimalistic jewelry. She is seen looking into the distance with a smile on her face and holding a red coffee mug in her hand. The same red was used for the coffee mug

in the model's hand, the coffee bean in the logo, and the word "world" in the brand slogan, to tie the aspects of the advertisement together. Two versions of this exact advertisement were created. The first condition shows the advertisement featuring a younger female model, approximately 25 years of age. The second condition displays an older female model, approximately 60 years of age. Both of the selected age groups are consistent with previous research examining the effects of younger and older advertising models (Bristol, 1996; Chevalier & Lichtlé, 2012).

To preserve internal validity, all visual and textual elements in the advertisements were held constant across both conditions. The background, brand logo, slogan, color scheme, overall layout, as well as the model's clothing, accessories, pose, facial expression, body language and gender, all remained identical. The only element that was manipulated was the model's age. The older model differed visually from the younger model by having slightly grey hair and more pronounced facial wrinkles.

Both advertisements were generated using artificial intelligence tools provided by ChatGPT. The younger model advertisement was created first, based on the observations made in the original advertisement research, and later slightly modified to generate the older-model version. This approach allowed a high degree of consistency between both advertisements, as only the model age needed to be modified from the first advertisement, and all other variables could remain controlled. This allowed any differences observed by participants to be attributed to the age of the model rather than the advertisement design.

The final advertisements used in the experiment are displayed in Appendix B.

3.3 Pre-Test

At the beginning of the study, a pre-test was conducted to verify that the age manipulation works, participants perceive the advertisements as realistic and believable, to identify design problems, ensure internal validity, and to evaluate questionnaire clarity (Malhotra, 2020). The pre-test included a total of 6 participants. They were all asked to complete the survey once and provide the researcher with valuable feedback.

During the pre-test, participants informed about some areas of improvement, which mainly were related to the clarity of the questionnaire. Participants of the pre-test recommended writing the words "brand" and "advertisement" in bold or capital letters to emphasize which factor is being analyzed, such as attitude towards the advertisement, which asks participants similar questions about the advertisement, and perceived brand attitude, which asks participants

about the brand. Furthermore, a participant pointed out that the advertisement should be emphasized by writing a short sentence above it, introducing it, and informing the participants to carefully view it. Lastly, participants suggested clarifying the requested answer form for the demographic question regarding the participants' nationality. They mentioned that it was not clear whether to write, e.g., "Austria" or "Austrian".

Considering this valuable feedback minor changes were made in the questionnaire. "brand" and "advertisement" were written in capital letters, to ensure participants knew what was being measured, a sentence was added above the advertisement to provide more clarity and emphasize the importance of carefully viewing the advertisement, and next to the question about nationality the following sentence was added with an example to help participants answer the question as intended "Please answer with country name, e.g. Austria".

To check advertisement realism and believability, as well as design problems, participants were privately asked via text on their perception of the advertisement. Participants consistently indicated that the advertisement appeared realistic and believable.

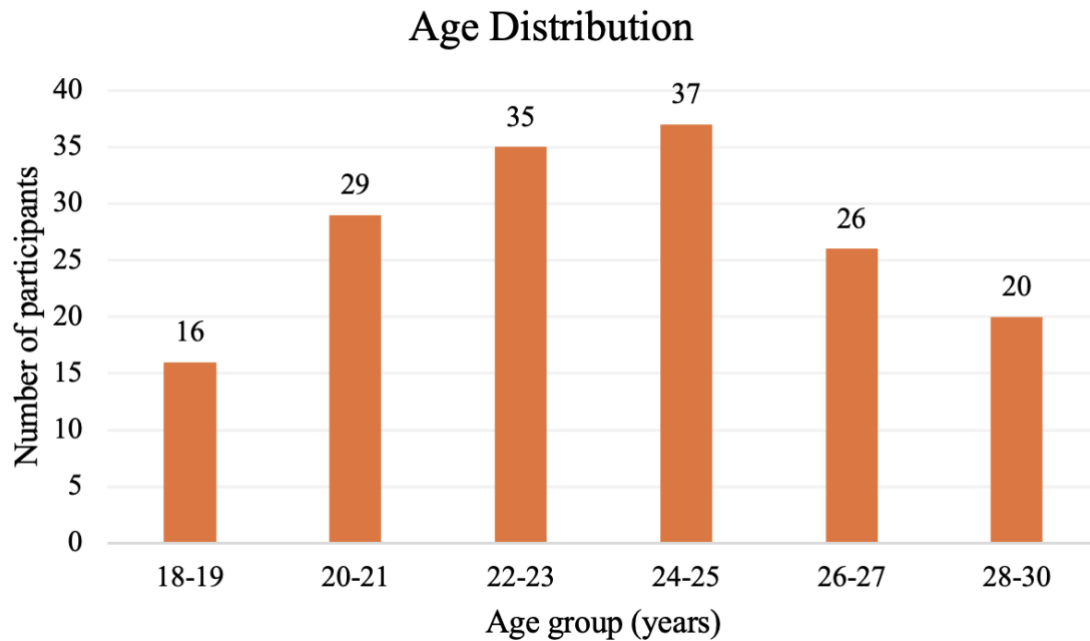
The pre-test also provided preliminary evidence that the age manipulation was successful. Participants were able to distinguish between the younger-model and older-model versions clearly and consistently identified the age differences between the two stimuli. No participants reported uncertainty regarding the age of the models or an unexpected response.

Overall, the findings of the pre-test indicated that the advertisements were perceived as realistic and credible, the questionnaire items were understood, and the age manipulation functioned as intended. The small changes that were made after getting feedback from participants significantly enhanced the transparency of the survey questionnaire and assisted in providing a more uniform understanding of the questions in the survey. As a result, the last version of the questionnaire was finalized and considered acceptable for getting data.

3.4 Sample Characteristics

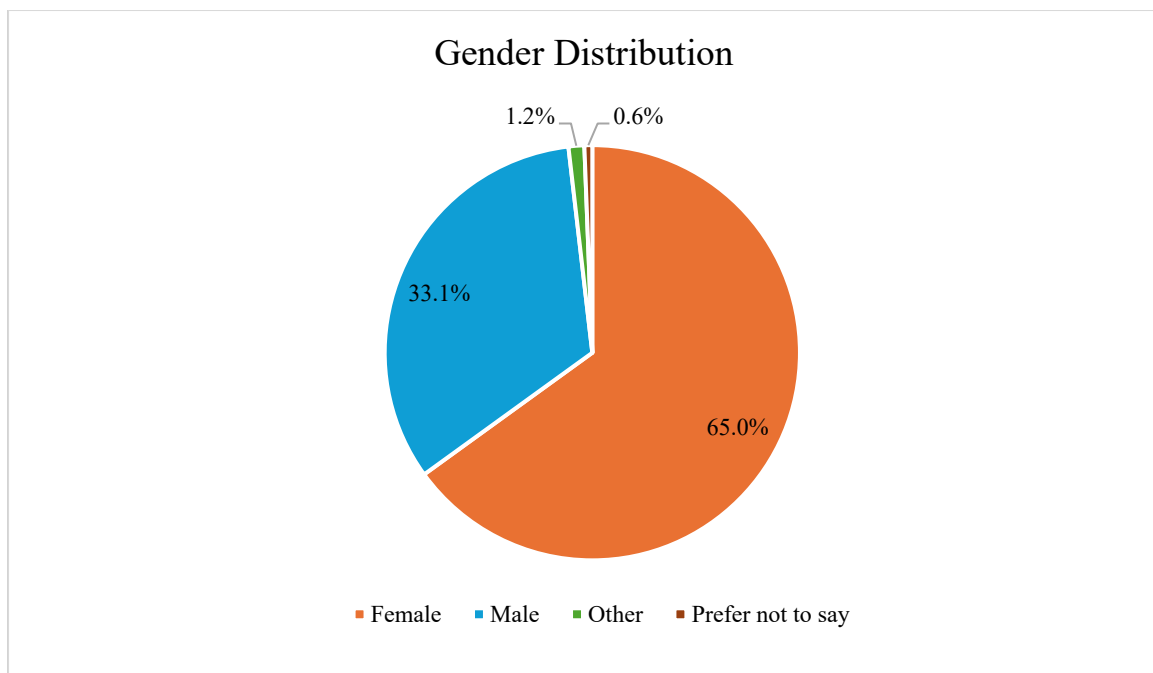
After the data were collected and screened, there were 163 participants that made it to the final sample. Among them, 81 (49.7%) were assigned to the younger model condition while 82 (50.3%) were assigned to the older model condition, indicating an almost ideal distribution across the two experimental conditions.

Figure 2. Age Distribution of Participants (N=163)



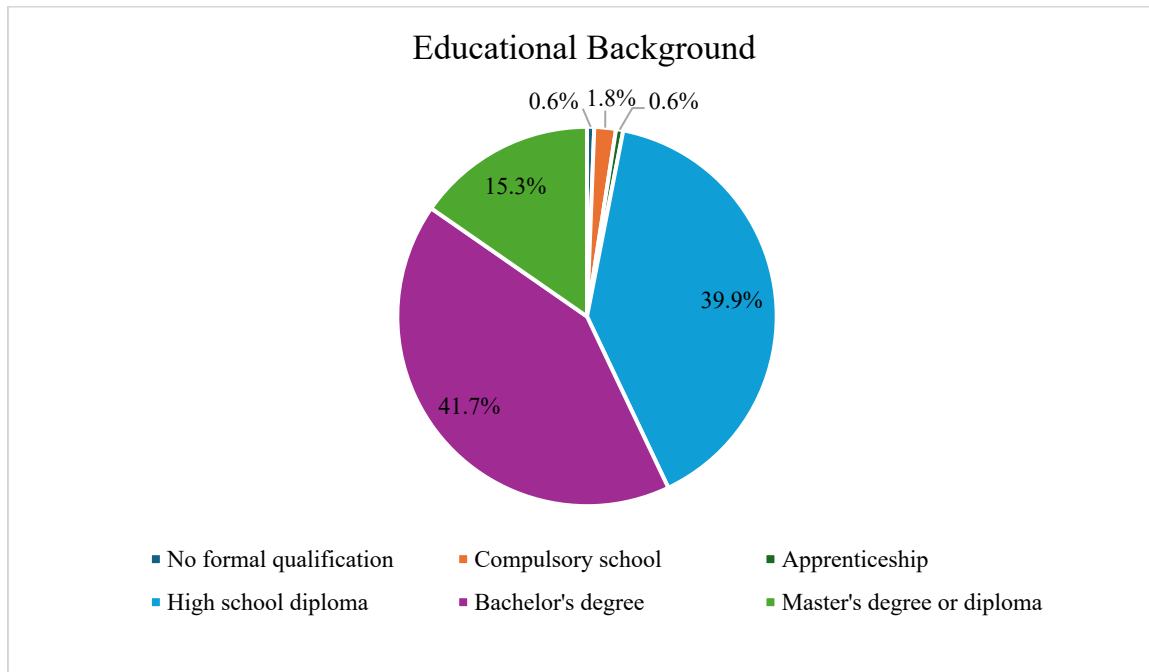
Participants' ages ranged from 18 to 30 years, with a mean age of 23.60 years (SD = 3.13). This range indicates their target audience, young adult consumers. Most of the participants were female (65.0%), and only 33.1% were male. A minority of the respondents reported "other" as a gender category (1.2%), and 1 participant (0.6%) preferred not to say their gender (see Figure 3).

Figure 3. Gender Distribution of Participants (N=163)



In terms of education, the largest group of participants had obtained a bachelor's degree (41.7%), closely followed by participants with a high school diploma (39.9%). Another 15.3% of the participants indicated that they had a master's degree or diploma degree. The rest of the respondents (3.1%) specified their school education as other categories, such as: No formal qualification, compulsory schooling, an apprenticeship has been completed.

Figure 4. Educational Background Distribution of Participants (N=163)



In order to represent clear examples of multinational English-language advertisements, the present research did not entail any limitations concerning the nationality of the respondents. Therefore, the sample comprised a broad range of national backgrounds. Austrian participants comprised the largest group (54.6%) in terms of their nationality, and the group of respondents from Germany was in second place (14.1%). The other participants represented a range of nationalities from other countries of Europe, Asia, North and South America, and Oceania, thus forming an internationally diverse group of respondents. The international diversity can be explained by the fact, that it was based on the convenience sampling technique, which involved the researcher's network and an environment of the international university.

3.5 Measures

The structure of a standardized internet questionnaire was used to measure some variables for testing the proposed conceptual model. The questionnaire contained the measurement of attitude toward the ad, perceived brand authenticity, perceived brand attitude, manipulation-

check variables, and demographic characteristics. Established measurement scales from prior literature were adapted to fit the context of the present study and analyze these variables. They were tailored to include the fictitious brand NOVARA. Depending on the nature of the construct, different response formats were employed, including seven-point Likert scales, seven-point semantic differential scales, single-choice questions, or open-answer questions.

For all multi-item constructs, the internal consistency of measurement scales was assessed using Cronbach's alpha (Bonett & Wright, 2015). Following satisfactory reliability, responses were composed into composite scores by calculating the arithmetic mean across corresponding items. Higher values reflected more positive evaluations of the respective construct.

A collective overview of all measurement items is provided in Appendix A.

Independent Variable: Age of the model

The independent variable of this study was the age of the model featured in the advertisement. Model age was experimentally manipulated through two advertising stimuli, which presented the same advertisement, while differentiating only in the age of the depicted model. One advertisement featured a younger female model, whereas the other featured an older female model. Participants were randomly assigned to one of the two experimental conditions within the online questionnaire. For statistical analyses, the experimental condition was dummy coded as a binary variable (0 = younger model; 1 = older model)

Mediating Variable: Attitude towards the advertisement (A_{Ad})

Attitude towards the advertisement (A_{Ad}) was conceptualized as the mediating variable within the proposed research model. The construct reflects an individual's overall evaluative response to an advertisement and represents the extent to which the advertisement is perceived positively or negatively (MacKenzie & Lutz, 1989; Mitchell & Olson, 1981)

A_{Ad} was measured using a six-item semantic differential scale developed by MacKenzie and Lutz (1989). Participants evaluated the advertisement on a seven-point semantic differential scale consisting of six bipolar adjective pairs (e.g., good/bad, pleasant/unpleasant), each representing an item. For each adjective pair, the positive evaluation was coded as 7 and the negative evaluation as 1. This meant a higher score indicated a more favorable attitude toward the advertisement. For purposes of analysis, a composite A_{Ad} score was subsequently calculated by averaging the six items.

Dependent Variables: Perceived Brand Authenticity (PBA) and Brand Attitude (BA)

Brand Authenticity served as the first dependent variable of the study. According to the conceptualization of Morhart et al. (2015), brand authenticity refers to consumers' perceptions of a brand as genuine, sincere, and true to its values.

Brand Authenticity was measured using the scale developed by Morhart et al. (2015). According to the recommendations of the original authors and this study's design, this study decided to focus on the two-dimensional integrity and credibility. Both dimensions are particularly relevant for evaluating perceptions of authenticity when using a fictional brand in the advertising context. Participants were asked to rate all 7 items (3 items on credibility and 4 items on integrity) on seven-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). Then, separate composite scores were calculated for both dimensions before joining them together into an overall brand authenticity score. Higher values indicated a stronger perception of brand authenticity.

Brand attitude represented the second dependent variable within the study's conceptual framework. Brand attitude describes consumers' overall evaluation of a brand and displays the degree to which a brand is perceived as favorable or unfavorable (Spears & Singh, 2004). Brand attitude was evaluated using the semantic differential scale developed by Spears and Singh (2004). Participants were asked to rate the fictitious coffee brand NOVARA using five seven-point bipolar adjective pairs (e.g., likable/unlikable, appealing/unappealing). Each item was coded accordingly: 7 represented the positive evaluation, and 1 the negative evaluation, meaning that higher scores reflected a more favorable attitude toward the brand. The arithmetic mean of the five items was calculated to obtain the overall brand attitude score.

Manipulation Checks

To assess whether the experimental manipulation of model age was perceived as intended, three manipulation checks were included within the questionnaire. First, participants were asked to indicate the perceived age of the featured model in the advertisement in years using an open-ended question. Second, they were asked to state how old the model in the advertisement appeared to them on a seven-point Likert scale, ranging from 1 (very young) to 7 (very old). Thirdly, participants were asked to indicate their perceived age fit with the model, meaning whether or not the model displayed to them fit their age group or not. Their responses were collected using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). These measures were included to verify that participants recognized the intended ages

of the two models and could clearly identify an age difference between the two experimental designs.

Demographics and Control Variables

The questionnaire concluded with a series of demographic questions collecting data on participants' age, gender, educational background, and nationality. Participant age was additionally included as a control variable in all statistical analyses to account for potential age-related differences in advertising evaluations. Age was measured as an open-ended numerical response, while gender and educational background were measured using single-choice response formats. Nationality was assessed using an open-ended question.

3.6 Data Analysis Strategy

After data collection, the data were exported from SoSci Survey and analyzed using IBM SPSS Statistics and Hayes's (2022) PROCESS macro (Version 5.0). Before hypothesis testing, the data were screened for completeness and consistency. Although all survey questions were configured as mandatory within the questionnaire, some cases had to be removed due to incomplete surveys, failed attention checks, lying outside the set age range, and invalid responses in the demographic section. Additionally, variables were labeled, value labels were assigned to ensure correct coding, and the measurement scales were adjusted.

Next, composite scores for attitude toward the advertisement, brand authenticity, and brand attitude were calculated by averaging the corresponding measurement items. Afterward, reliability analyses were conducted using Cronbach's alpha to assess the internal consistency of the measurement scales. Descriptive statistics, including means, standard deviations, minimum and maximum values, were calculated to summarize the characteristics of the measured constructs.

Before testing the proposed hypotheses, the manipulation's effectiveness was assessed through three manipulation checks. To do so, independent-samples t-tests were conducted to determine whether participants perceived the intended age differences between the younger and older models and whether they identified as closer in age to one of the two models.

To test H1 and H2, which assess the direct effects of model age on brand authenticity and brand attitude, independent-samples t-tests compared the two experimental conditions. H3 and H4 were examined using Hayes' (2022) PROCESS macro for SPSS (Model 4). Separate mediation analyses tested whether attitude toward the advertisement mediated the relationships

between model age and brand authenticity and between model age and brand attitude. Indirect effects were estimated using bootstrap confidence intervals based on 5,000 bootstrap samples. Mediation was considered present when the 95% bootstrap confidence interval for the indirect effect did not include zero, as suggested by Hayes (2022).

4. Results

4.1 Preliminary Analysis

4.1.1 Data Screening and Preparation

Prior to the statistical analysis, the data set was screened to ensure that only valid and complete responses from the target population were included in the analysis. A total of 227 respondents participated in the survey, of whom 180 completed it. Therefore, 47 incomplete questionnaires were excluded from further analyses.

The remaining sample was then screened accordingly to ensure that the final sample met the predefined criteria of the methodology. This meant that incomplete responses, respondents outside the target age range (18-30 years), invalid demographic responses and failed attention checks were to be excluded from the analyses.

As this study had a clearly defined target population with a set age range between 18 and 30 years of age, five participants had to be removed as they exceeded the maximum age limit. In addition, three cases were removed due to invalid responses in the demographic section, resulting in a sample size of 172 participants before the attention check.

To ensure that all participants had paid sufficient attention to the advertising stimulus, an attention check was included immediately after the advertisement. Participants were asked to correctly identify the product category displayed in the advertisement from five response options: coffee, tea, energy drinks, chocolate and finally I don't remember. Nine respondents failed to correctly answer the attention check and therefore had to be excluded from the analyses.

Following the screening procedure, the final sample size consisted of 163 participants, which served as the basis for all of the following analyses. As only complete questionnaires were included in the final sample, no further treatment of missing data had to be conducted.

4.1.2 Reliability Analysis

Following the data screening procedure, the internal consistency of the measurement items was assessed using Cronbach's alpha (α). After confirming satisfactory reliability, composite mean scores were calculated by averaging the corresponding items for each multi-item construct, including attitude toward the advertisement (A_{Ad}), perceived brand authenticity (PBA), and brand attitude (BA).

As shown in Table 1, all three constructs demonstrated excellent internal consistency, with Cronbach's alpha values ranging from 0.90 to 0.95. All constructs exceeded the recommended threshold of 0.70 for acceptable internal consistency (Bonett & Wright, 2015). Attitude toward the advertisement displayed an alpha of $\alpha=0.908$, brand authenticity an alpha of $\alpha=0.906$, and brand attitude an alpha of $\alpha=0.942$. These results indicate that all measurement scales showed excellent internal consistency and were therefore considered reliable and suitable for further statistical analyses.

Table 1. Reliability Analysis of the Measurement Scales

Construct	Number of items	Cronbach's alpha
Attitude toward the Advertisement	6	0.908
Brand Authenticity	7	0.906
Brand Attitude	5	0.942

Note. Cronbach's alpha values above 0.70 indicate acceptable internal consistency (Bonett & Wright, 2015).

4.1.3 Manipulation Check

To verify whether participants successfully identified the manipulation of the advertising model's age, a manipulation check was conducted using three items assessing participants' perceptions of the model's age and the perceived age fit between the model and themselves. Independent-samples t-tests were performed to compare the younger model condition ($n = 81$) and the older model condition ($n = 82$). Levene's tests were carried out for each item and indicated unequal variances for two of the three manipulation check items (MC02 & MC03), with significance values under $p < 0.05$. For the remaining item (MC01), equal variances were assumed across groups, with a non-significant result ($p = 0.430$).

As expected, results showed that participants who were exposed to the advertisement featuring the older model perceived the model as significantly older than participants who were exposed to the advertisement featuring the younger model. These findings are reflected by the perceived age of the model (MC01) and perceived model age (MC02) items. Additional evidence was found when checking the item perceived age fit, in which participants in the younger model condition ($M = 4.38$, $SD = 1.895$) reported significantly higher levels of perceived age fit than those in the older model condition ($M = 2.11$, $SD = 1.474$). These results indicate that the manipulation check was successful, as participants were clearly able to distinguish between the younger and older advertising model.

Table 2. Independent-Samples *t*-Test Results for the Manipulation Checks

Manipulation Check	Younger Model	Older Model	<i>t</i>	<i>p</i>
Perceived Age of the Model (MC01)	M = 1.53, SD = 0.776	M = 2.35, SD = 0.743	-6.914	< .001
Perceived Model Age (MC02)	M = 3.06, SD = 0.780	M = 4.51, SD = 0.805	-11.682	< .001
Perceived Age Fit (MC03)	M = 4.38, SD = 1.895	M = 2.11, SD = 1.474	8.542	< .001

Note. Higher scores on perceived age of the model and perceived model age items indicate that the advertising model was perceived as older. Higher scores on perceived age fit indicate a greater perceived fit between the model's age and the consumer's age.

4.2 Descriptive Statistics

Table 3 presents the descriptive statistics of the study variables. Overall, participants reported a moderately positive evaluation across all three constructs. Attitude toward the advertisement received a mean score of $M = 0.63$ ($SD = 1.13$), brand authenticity a mean score of $M = 4.13$ ($SD = 1.00$), and brand attitude achieved the highest mean score of $M = 4.70$ ($SD = 1.12$). The standard deviation scores observed around all three constructs indicate a reasonable amount of variability, meaning that participants did not respond uniformly across the scales. Furthermore, the observed minimum and maximum values revealed that participants used a broad range of available responses across the scales, with responses sometimes covering or nearly covering the full range of the respective 7-point scales. These results demonstrate a satisfactory distribution of the study variables and provide an appropriate basis for the following hypothesis testing.

Table 3. Descriptive Statistics of the Study Variables

Construct	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Attitude toward the Advertisement	4.63	1.13	1.50	7.00
Brand Authenticity	4.13	1.00	1.00	6.43
Brand Attitude	4.70	1.12	1.00	7.00

Note. $N = 163$. Attitude toward the Advertisement and Brand Authenticity were measured using a 7-point semantic differential scale using bipolar adjectives. Brand Attitude was measured on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher values indicate more favorable evaluations of the respective construct.

4.3 Hypothesis Testing

To test the proposed hypothesis, multiple linear regression analyses and mediation analyses using Hayes' (2022) PROCESS macro (Model 4) were conducted. Participant age was included as a control variable in all analyses. Regression analyses examined the direct effects of model age on perceived brand authenticity and brand attitude (H1 and H2). Mediation analyses with 5,000 bias-corrected bootstrap samples tested whether attitude toward the advertisement mediated the relationships with these dependent variables (H3 and H4).

H1:

H1 proposed that model age has a significant effect on perceived brand authenticity. To test this relationship, a multiple linear regression analysis was carried out with perceived brand authenticity as the dependent variable and model age as the independent variable whilst controlling for participant age. As shown in Table 4, model age did not significantly affect perceived brand authenticity ($B = 0.02$, $SE = 0.16$, $\beta = 0.008$, $t = 0.10$, $p = 0.917$, 95% CI [-0.30, 0.33]). Likewise, participant age was not significantly associated with perceived brand authenticity ($B = -0.03$, $SE = 0.03$, $\beta = -0.093$, $t = -1.17$, $p = 0.245$, 95% CI [-0.08, 0.02]). Furthermore, the overall regression model was not statistically significant ($F(2,160) = 0.717$, $p = 0.490$, $R^2 = 0.009$), indicating that the predictors explained only 0.9% of the variance in perceived brand authenticity together. As a result, H1 was not supported.

Table 4. Multiple Linear Regression Analysis predicting Perceived Brand Authenticity (H1)

Predictor	B	SE	β	t	p	95 % CI
Model Age	0.02	0.16	0.008	0.10	0.917	[-0.30, 0.33]
Participant Age	-0.03	0.03	-0.093	-1.17	0.245	[-0.08, 0.02]
Model Statistics						Value
R^2						0.009
Adjusted R^2						-0.004
F (2,160)						0.717
p						0.490

Note. $N = 163$. The dependent variable was perceived brand authenticity. Participant age was included as a control variable. Model Age Condition was coded 0 = younger model and 1 = older model.

H2:

H2 proposed that model age has a significant effect on brand attitude. A second multiple regression analysis was conducted, with model age as the independent variable, participant age as a control variable, and brand attitude as the dependent variable. As illustrated in Table 5, the model age condition did not significantly predict brand attitude ($B = 0.01$, $SE = 0.18$, $\beta = 0.003$, $t = 0.04$, $p = 0.972$, 95% CI $[-0.34, 0.35]$). However, participant age showed a significant relationship with brand attitude ($B = 0.07$, $SE = 0.03$, $\beta = 0.182$, $t = 2.32$, $p = 0.022$, 95% CI $[0.01, 0.12]$), indicating that even within the limited age range of the target sample, older participants tended to have a more positive brand attitude. Nevertheless, the overall regression model was not statistically significant ($F(2,160) = 2.730$, $p = 0.068$, $R^2 = 0.033$), explaining 3.3% of the variance in brand attitude. Accordingly, H2 was not supported.

Table 5. Multiple Linear Regression Analysis predicting Brand Attitude (H2)

Predictor	B	SE	β	t	p	95 % CI
Model Age Condition	0.01	0.18	0.003	0.04	0.972	[-0.34, 0.35]
Participant Age	0.07	0.03	0.182	2.32	0.022*	[0.01, 0.12]

Model Statistics	Value
R^2	0.033
Adjusted R^2	0.021
$F(2,160)$	2.730
p	0.068

Note. $N = 163$. The dependent variable was brand attitude. Participant age was included as a control variable. Model Age Condition was coded 0 = younger model and 1 = older model.

H3:

H3 proposed that attitude toward the advertisement mediates the relationship between model age and perceived brand authenticity. To test this relationship, a mediation analysis was carried out using Hayes' (2022) PROCESS macro (Model 4) while controlling for participant age. When viewing Table 6, path a's results clearly show that model age did not significantly predict attitude toward the advertisement ($B = 0.010$, $SE = 0.17$, $t = 0.06$, $p = 0.955$, $[-0.33, 0.35]$). However, path b, which measured the relationship between A_{Ad} and PBA, revealed that A_{Ad} significantly predicts PBA ($B = 0.502$, $SE = 0.06$, $t = 8.03$, $p < .001$, $[0.38, 0.63]$). The direct effect of model age on PBA remained non-significant ($B = 0.012$, $SE = 0.13$, $t = 0.09$, $p = 0.939$, $[-0.25, 0.28]$). Lastly, the indirect effect between model age and PBA through A_{Ad} was not

significant ($B = 0.005$, $\text{BootSE} = 0.09$), as the bootstrap confidence interval included zero with a lower interval of -0.16 and an upper interval of 0.17. Hence, H3 was not supported.

Table 6. Mediation Analysis (PROCESS Model 4) for the Effect of Model Age on Perceived Brand Authenticity through Attitude toward the Advertisement (H3)

Effect	Path	B	SE	t	p	95 % CI
Path a	Model Age $\rightarrow$ A _{Ad}	0.010	0.17	0.06	0.955	[-0.33, 0.35]
Path b	A _{Ad} $\rightarrow$ PBA	0.502	0.06	8.03	< .001	[0.38, 0.63]
Direct effect (c')	Model Age $\rightarrow$ PBA	0.012	0.13	0.09	0.939	[-0.25, 0.28]
Indirect effect (ab)	Model Age $\rightarrow$ A _{Ad} $\rightarrow$ PBA	0.005	0.09	—	—	[-0.16, 0.17]

Note. PROCESS Model 4 (Hayes, 2022) with 5,000 bias-corrected bootstrap samples. Participant age was included as a covariate. Mediation is supported when the 95% bootstrap confidence interval for the indirect effect does not include zero.

H4:

H4 proposed that attitude toward the advertisement mediates the relationship between model age and brand attitude. A second mediation analysis using the PROCESS Model 4 with participant age included as a covariate was performed. As presented in Table 7, path a revealed that model age did not significantly predict attitude toward the advertisement ($B = 0.010$, $SE = 0.17$, $t = 0.06$, $p = 0.955$, $[-0.33, 0.35]$). In contrast, path b, which measured the relationship between A_{Ad} and BA showed a significant effect ($B = 0.762$, $SE = 0.06$, $t = 13.80$, $p = <.001$, $[0.65, 0.87]$), meaning that A_{Ad} predicts BA. The direct effect between model age and brand attitude proved to be not significant ($B = -0.001$, $SE = 0.12$, $t = -0.01$, $p = 0.992$, $[-0.24, 0.23]$). Furthermore, as the bootstrap confidence interval included zero ($\text{BootCI} = [-0.25, 0.25]$), the indirect effect of model age on brand attitude through the attitude toward the advertisement was not significant ($B = 0.007$, $\text{BootSE} = 0.13$). Consequently, H4 was not supported.

Table 7. Mediation Analysis (PROCESS Model 4) for the Effect of Model Age on Brand Attitude through Attitude toward the Advertisement (H4)

Effect	Path	B	SE	t	p	95 % CI
Path a	Model Age $\rightarrow$ A _{Ad}	0.010	0.17	0.06	0.955	[-0.33, 0.35]
Path b	A _{Ad} $\rightarrow$ A _B	0.762	0.06	13.80	< .001	[0.65, 0.87]
Direct effect (c')	Model Age $\rightarrow$ A _B	-0.001	0.12	-0.01	0.992	[-0.24, 0.23]

Indirect effect (ab)	Model Age $\rightarrow$ $A_{Ad} \rightarrow A_B$	0.007	0.13	–	–	[-0.25, 0.25]
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Note. PROCESS Model 4 (Hayes, 2022) with 5,000 bias-corrected bootstrap samples. Participant age was included as a covariate. Mediation is supported when the 95% bootstrap confidence interval for the indirect effect does not include zero.

4.4 Summary of Results

Table 8 provides an overview of the hypothesis testing results. It shows that none of the tested hypotheses were supported. On the one hand, the regression analyses indicated that model age neither had a significant effect on PBA nor on BA. On the other hand, the mediation analyses showed that A_{Ad} did not partially or fully mediate the relationship between model age and either dependent variable, as the bootstrap confidence intervals for the indirect effects included zero.

Nevertheless, the mediation analyses revealed that attitude toward the advertisement consistently served as a significant positive predictor for both PBA and BA. But since model age had no significant influence on A_{Ad} , the suggested mediation mechanism was not supported. The implications of these findings are discussed in the following discussion chapter.

Table 8. Summary of Hypothesis Testing

Hypothesis	Statement	Result
H1	Model age has a significant effect on perceived brand authenticity.	Not supported
H2	Model age has a significant effect on brand attitude.	Not supported
H3	Attitude toward the advertisement mediates the relationship between model age and perceived brand authenticity.	Not supported
H4	Attitude toward the advertisement mediates the relationship between model age and brand attitude.	Not supported

5. Discussion

5.1 Key Findings

The present study examined whether the age of an advertising model influences younger consumers' (18- to 30-year-olds) perceptions of brand authenticity and brand attitude, while investigating the mediating role of attitude toward the advertisement. Four hypotheses were tested using a between-subjects online experiment, in which participants were exposed to an advertising stimulus featuring either a younger or older-aged model. Contrary to the theoretical expectations derived from the literature review, none of the hypotheses were supported. Nevertheless, the findings of this study provide valuable insights into the role of model age in advertising and contribute to ongoing discussions regarding the conditions under which model age influences consumer evaluations in advertising.

H1, which proposed that model age had a significant effect on perceived brand authenticity, was not supported. No significant difference was recorded in the perceived brand authenticity evaluations of participants exposed to either the advertising stimulus featuring the younger or the older model. Therefore, these findings do not support the theoretical expectations developed in Chapter 2, which suggested that model age may function as a meaningful advertising cue capable of shaping consumers' perceptions of a brand through the transfer of meaning (Huber et al., 2013; McCracken, 1989). However, these results are consistent with the mixed empirical evidence identified throughout the literature review. Even though a number of previous research indicates more positive attitudes towards either younger or older models, others revealed that the reaction of consumers to models does not vary due to their age (Drolet & Yoon, 2020; Mohan et al., 2022).

Among these reviewed studies, the findings of Greco et al.'s (1997) are particularly similar to the findings reported in this thesis, as they showed that there was no significant preference for younger or older models when consumers evaluated unfamiliar brands. Since the present study employed an unknown fictitious brand, the absence of significant differences may suggest that model age alone is insufficient to influence consumers' perceptions of brand authenticity when consumers lack pre-existing information on the brand. Thus, the present findings contribute to the inconsistent body of literature on model age in advertising by providing further evidence that the effectiveness of younger and older models on brand authenticity cannot be explained by age alone. The results instead suggest that additional characteristics of the advertisement, the advertised brand, or the consumer may determine whether model age becomes a meaningful cue during brand evaluations.

H2, proposed that model age has a significant effect on brand attitude, and was like H1 not supported. There were also no significant differences recorded in the participants' attitudes toward the advertised brand after being exposed to either the advertisement featuring the younger or older model. This meant that the findings did not support the theoretical expectations developed in Chapter 2, which suggested the model age, as an advertising cue, may influence consumers' overall evaluations of a brand (Chevalier & Lichtlé, 2012). Even though previous literature consistently identified brand attitude as one of the primary outcomes of advertising effectiveness (Mitchell & Olson, 1981; Spears & Singh, 2004), the present results indicate that when using a fictitious brand, the age of the advertising model alone was insufficient to alter consumers' overall brand evaluations. Instead, brand attitude appears to be influenced by a broader combination of cognitive evaluations and affective responses, as mentioned in previously conducted studies (Mitchell & Olson, 1981; Mittal, 1990).

Unlike the direct effects proposed in H1 and H2, H3 and H4 examined whether attitude toward the advertisement had a mediating effect on the relationship between model age and either perceived brand authenticity (H3) or brand attitude (H4). Neither of the proposed mediation hypotheses received empirical support, and therefore both hypotheses had to be rejected. The reasoning behind their rejection is not because A_{Ad} failed to predict the dependent variables, as it significantly predicted both perceived brand authenticity and brand attitude, but rather because model age did not significantly influence the participants' attitudes toward the advertisement. Therefore, the first stage of the proposed mediation process could not be confirmed, and no significant indirect effect could be found.

Despite the absence of significant mediation effects, the findings remain theoretically meaningful, as they match the body of literature collected in Chapter 2 while also extending previous research. Prior research has consistently identified attitude toward the advertisement as one of the strongest antecedents of brand attitude (Brown & Stayman, 1992; Eastin & Lee, 2020; Gresham & Shimp, 1985; MacKenzie et al., 1986; Mitchell & Olson, 1981; Shimp, 1981). This relationship between A_{Ad} and BA was also identified in the present study, as A_{Ad} remained a significant positive predictor of BA. Thereby, the findings provide further support for the established role of A_{Ad} as an important determinant of consumer brand evaluations.

Beyond its established influence on brand attitude, the present findings indicate that consumers' attitudes toward an advertisement are also positively associated with their perceptions of brand authenticity. Even though previous research has primarily focused on the relationship between A_{Ad} and BA, the present study proposed that favorable evaluations of an advertisement may also extend to consumers' perceptions of brand authenticity, based on the

fact that authenticity is formed through the interpretation of marketing-related cues communicated by a brand (Morhart et al., 2015). The observed significant positive relationship between A_{Ad} and PBA in this study provides support for this theoretical reasoning and hence suggests that consumers who evaluate an advertisement more favorably are also more likely to perceive the advertised brand as more authentic.

In turn, the absence of the mediation should not be interpreted as evidence against the theoretical importance of the concept attitude toward the advertisement. But rather, the findings of this study indicate that the conceptualized mediation mechanism was interrupted because model age failed to significantly influence consumers' evaluations of the advertisement.

5.2 Theoretical Implications

This thesis contributes to the existing literature on model age representation in advertising, as it provides additional evidence that the influence of model age on consumers' evaluations is less straightforward than previously suggested. Whereas earlier research reported inconsistent findings regarding whether younger or older advertising models generate more favorable consumer responses (Bristol, 1996; Drolet & Yoon, 2020; Mazis et al., 1992; Mohan et al., 2022), this study's results imply that in the context of an unfamiliar fictitious brand, model age alone was insufficient to influence consumers' perceptions of brand authenticity, brand attitude, or attitude toward the advertisement. Therefore, these observations reinforce the conclusion drawn throughout the literature review that these consumer responses to model age cannot be explained by age alone. Instead, they suggest that the effectiveness of younger and older advertising models is likely to depend on additional contextual factors, such as the characteristics of the advertisement, the advertised brand, or the consumer. Furthermore, by not identifying one age group as more effective, this thesis contributes a more nuanced understanding of model age by highlighting the importance of considering other advertising cues alongside model age.

The second theoretical contribution of this study relates to the role of attitude toward the advertisement within the proposed conceptual framework. Although the hypothesized mediation effects were not supported, the findings reaffirm the central theoretical importance of attitude toward the advertisement in explaining consumers' evaluations of brands. In line with previous research, A_{Ad} remained a consistent positive predictor of brand attitude, and thus provided further support for the Affect Transfer Hypothesis and the Dual Mediation Hypothesis, both of which proposed that consumers transfer their evaluations of the advertisement to the

advertised brand (Brown & Stayman, 1992; MacKenzie et al., 1986). Additionally, the present results however demonstrated that this mechanism depends on the advertising characteristic under investigation being capable of influencing consumers' evaluations of the advertisement in the first place. Within the present study, model age did not fulfil this role, implying that not every advertising cue is sufficient to activate the evaluative process proposed by this thesis's framework.

The third and final contribution of this thesis is to the emerging discussion surrounding perceived brand authenticity. Unlike previous research that has primarily conceptualized authenticity as a consumer perception that develops through the interpretation of marketing-related cues communicated by a brand (Bruhn et al., 2012; Morhart et al., 2015; Napoli et al., 2014), the present study proposed that consumers' evaluations of an advertisement may also influence these authenticity perceptions. This proposal stems from the significant positive relationship that was identified between A_{Ad} and PBA, which provides initial empirical support for this theoretical proposition. As a result, the findings suggest that favorable evaluations of an advertisement may extend beyond traditional advertising outcomes and contribute to consumers' perceptions of a brand's authenticity. Even without the establishment of the proposed mediation model, the results broaden the theoretical understanding of how authenticity perceptions of a brand may develop and indicate A_{Ad} as a potentially meaningful antecedent of PBA. Thereby, this thesis lays the foundation for future research to examine whether other characteristics of advertisements, beyond or alongside model age, influence perceived brand authenticity through consumers' attitudes toward the advertisement.

5.3 Managerial Implications

The results of this study offer several practical implications for marketers seeking to integrate age-diverse models into their advertising campaigns. Most importantly, they indicate that for unfamiliar brands without previously established consumer perceptions, the age of an advertising model alone is unlikely to influence consumers' perceptions of brand authenticity and brand attitude. This suggests that managers should avoid viewing model age as a stand-alone driver of advertising effectiveness. When selecting a younger or older model for an advertisement, managers should instead ensure that it is part of a broader communication strategy in which it complements the brand's positioning, campaign objectives, and intended audience. This implication is grounded in previous research, which suggests that consumers

form their evaluations by interpreting multiple marketing-related cues rather than relying on a single advertising characteristic (Morhart et al., 2015).

Another practical implication concerns the overall design of advertising campaigns. Although this study demonstrated that the age of the advertising model did not shape participants' evaluations of the advertisement, A_{Ad} proved to be a significant predictor of both BA and PBA. Therefore, from a managerial perspective, these insights highlight the importance of creating advertisements that consumers perceive as appealing, credible, and engaging. Marketers need to consider how different components of an advertisement work together to create an overall positive evaluation, instead of expecting that just one executional element of an advertisement, such as model age, can improve brand evaluations. This recommendation is supported by previous research demonstrating that favorable evaluations of advertisements are an important driver of brand evaluations (Brown & Stayman, 1992; MacKenzie et al., 1986).

The findings also provide useful insights for managers seeking to strengthen perceptions of brand authenticity. Simply featuring either, a younger or older advertising model does not appear to be sufficient to improve consumers' authenticity perceptions. Instead, brand authenticity is likely to be shaped by the combined influence of multiple marketing-related cues communicated through the brand, rather than through a single advertising characteristic (Bruhn et al., 2012; Morhart et al., 2015). Managers should therefore focus on creating advertisements in which the visual presentation, advertising message, and overall brand positioning consistently reinforce the intended values and identity that the brand wants to communicate. Hence, a coherent advertising strategy is likely to contribute more to authentic perceptions of the brand than an isolated executional element of the advertisement, such as the age of the advertising model.

5.4 Limitations

The most important limitation concerns the composition of the sample. Although the present study intentionally focused on consumers between the ages of 18 and 30 years, the final sample was predominantly female and highly educated. This demographic composition is likely attributable to the use of convenience sampling, in which participants were primarily recruited through the researcher's personal network and on a university campus. While this recruitment strategy facilitated easy access to the intended target group and enabled efficient data collection, it resulted in a sample that cannot be considered representative of the broader consumer population. In addition, limiting the sample to younger consumers may have influenced the

observed findings. This is particularly relevant because consumers' evaluations of advertising models may differ depending on their own age, as they are influenced by age similarity and identification with the advertising model (Bristol, 1996; Chevalier & Lichtlé, 2012). Thus, although the present findings provide valuable insights into younger consumers' responses, they cannot automatically be generalized to consumers from other age groups.

A second limitation relates to the generalizability of the experimental setting. The present study examined consumers' responses to a single advertisement for a fictitious brand featuring either a younger or an older female model. While this design strengthened the internal validity of the experiment by controlling a wide range of advertising conditions and eliminating the influence of prior brand knowledge, it also limits the extent to which the findings can be transferred to other advertising contexts. Consumers' evaluations of established brands are typically influenced by previous experiences and existing brand associations. Therefore, it remains uncertain whether similar findings would emerge for established brands. Additionally, the study employed one age-neutral product and one relatively age-neutral advertising message. These were intentional design decisions that allowed model age to be examined under highly controlled conditions. However, the findings may differ for advertisements featuring products or messages that are more strongly associated with a particular age group. Finally, both experimental advertising stimuli featured female models. Thus, the extent to which the present findings apply to advertisements featuring male or mixed-gender models remains uncertain.

The final major limitation addresses the operationalization of perceived brand authenticity. In line with the objectives of the present study and the use of a fictitious brand, the construct was operationalized using only the two credibility and integrity dimensions proposed by Morhart et al. (2015). The dimensions continuity and symbolism were deliberately excluded because they require prior knowledge of or repeated interactions with a brand (Morhart et al., 2015), conditions that could not reasonably be met within the experimental design. This decision was theoretically justified and ensured consistency between the conceptual framework and the experimental setting. Nevertheless, measuring only two out of the four proposed dimensions means that the present study captures only selected aspects of the multidimensional construct of perceived brand authenticity, and not the full construct. Accordingly, the present findings should be interpreted as relating specifically to consumers' evaluations of brand credibility and integrity, rather than to the multidimensional construct of brand authenticity as a whole. Therefore, the potential influence of model age on the dimensions continuity and symbolism remains unexamined.

5.5 Future Research

Several opportunities for future research emerge from the findings of the present study. Identifying the conditions under which model age becomes a meaningful advertising cue represents an important next step in this research field. Since model age alone did not significantly influence consumers' perceptions of brand authenticity or brand attitude, future research should examine whether other factors such as brand familiarity, product category, model-brand fit, or additional advertising cues moderate these relationships. Examining these potential moderating effects may help identify the conditions under which model age influences consumers' perceived brand authenticity and brand attitude.

Further attention should be warranted to the relationship between attitude toward the advertisement and perceived brand authenticity. Even though the proposed mediation effect was not supported, attitude toward the advertisement remained a significant predictor for both brand evaluations. Nevertheless, previous research has primarily only focused on its influence on brand attitude. Therefore, replicating the relationship between A_{Ad} and PBA across different advertising contexts and examining whether A_{Ad} mediates other advertising characteristics may further advance the understanding of how consumers develop authenticity perceptions.

The generalizability of the present finding likewise deserves additional attention. Replicating the study using established brands, non-age-neutral products or advertising messages, and male or mixed-gender advertising models could provide a better understanding of how the observed findings may extend beyond the experimental setting employed in this study.

Finally, future research could be conducted on whether model age influences other consumer outcomes or behavioral intentions. Following a similar approach as MacKenzie (MacKenzie et al., 1986), the present study's conceptual framework could be altered to include advertising outcomes such as purchase intentions and advertising effectiveness. Examining these outcomes may provide a more comprehensive understanding of the role of age representation in advertising.

6. Conclusion

This thesis examined the effect of model age in advertising on consumers' attitudes toward the advertisement, perceived brand authenticity, and brand attitude. Additionally, it investigated whether attitude toward the advertisement served as an underlying mechanism through which model age shapes both of these brand outcomes. The proposed conceptual model was not supported by any of the findings. Model age had no significant effect on attitude toward the advertisement, perceived brand authenticity, or brand attitude, and thus no mediating effect could be established for attitude toward the advertisement. However, A_{Ad} significantly predicted both PBA and BA, reaffirming its importance in shaping consumer evaluations.

By addressing the initially found research gaps, the thesis contributes to extending the current research on age representation by examining younger instead of older consumers' responses toward younger and older models in advertising. Furthermore, it provides a more in-depth understanding of the relationship between model age and brand evaluations by analyzing its effects on PBA and BA, while investigating the mediating role of A_{Ad} .

Concluding, the findings of this thesis suggest that model age is unlikely to function as an isolated advertising cue. Instead, consumers seem to form their evaluations by combining multiple advertising characteristics. The influence of model age may therefore depend less on the model's age itself but only become influential when considered alongside other contextual advertising cues.

References

- Andrew A. Mitchell. (1986). The Effect of Verbal and Visual Components of Advertisements on Brand Attitudes and Attitude Toward the Advertisement. *Journal of Consumer Research*, 13(1), 12–24.
- Beverland, M. (2005). Brand management and the challenge of authenticity. *The Journal of Product and Brand Management*, 14(7), 460–461.
<https://doi.org/10.1108/10610420510633413>
- Bhatt, N., Jayswal, R. M., & Patel, J. D. (2013). Impact of Celebrity Endorser's Source Credibility on Attitude Towards Advertisements and Brands. *South Asian Journal of Management*, 20(4), 74–95.
- Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, 36(1), 3–15. <https://doi.org/10.1002/job.1960>
- Bowen, C. E., Spuling, S. M., Kornadt, A. E., & Wiest, M. (2020). Young people feel wise and older people feel energetic: Comparing age stereotypes and self-evaluations across adulthood. *European Journal of Ageing*, 17(4), 435–444.
<https://doi.org/10.1007/s10433-019-00548-4>
- Bristol, T. (1996). Persuading Senior Adults: The Influence of Endorser Age on Brand Attitudes. *Journal of Current Issues & Research in Advertising (CTC Press)*, 18(2), 59. (7586079). <https://doi.org/10.1080/10641734.1996.10505052>
- Brown, S. P., & Stayman, D. M. (1992). Antecedents and Consequences of Attitude Toward the Ad: A Meta-Analysis. *Journal of Consumer Research*, 19(1), 34–51.
- Bruhn, M., Schoenmüller, V., Schäfer, D., & Heinrich, D. (2012). Brand Authenticity: Towards a Deeper Understanding of Its Conceptualization and Measurement. *Advances in Consumer Research*, 40, 567–576. (92981460).

- Campagna, C. L., Donthu, N., & Yoo, B. (2023). Brand authenticity: Literature review, comprehensive definition, and an amalgamated scale. *Journal of Marketing Theory and Practice*, 31(2), 129–145. <https://doi.org/10.1080/10696679.2021.2018937>
- Campbell, C., Sands, S., McFerran, B., & Mavrommatis, A. (2025). Diversity representation in advertising. *Journal of the Academy of Marketing Science*, 53(2), 588–616. <https://doi.org/10.1007/s11747-023-00994-8>
- Carrigan, M., & Szmigin, I. (1998). The usage and portrayal of older models in contemporary consumer advertising. *Journal of Marketing Practice: Applied Marketing Science*, 4(8), 231–248. <https://doi.org/10.1108/EUM00000000004544>
- Carrigan, M., & Szmigin, I. (1999). The representation of older people in advertisements. *Journal of the Market Research Society*, 41(3), 311–312.
- Carrigan, M., & Szmigin, I. (2000). Does advertising in the UK need older models? *Journal of Product & Brand Management*, 9(2), 128–143. <https://doi.org/10.1108/10610420010322170>
- Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization*, 81(1), 1–8. <https://doi.org/10.1016/j.jebo.2011.08.009>
- Chevalier, C., & Lichtlé, M.-C. (2012). The Influence of the Perceived Age of the Model Shown in an Ad on the Effectiveness of Advertising. *Recherche et Applications En Marketing (English Edition)*, 27(2), 3–19. <https://doi.org/10.1177/205157071202700201>
- Chevalier, C., & Moal-Ulvoas, G. (2018). The use of mature models in advertisements and its contribution to the spirituality of older consumers. *Journal of Consumer Marketing*, 35(7), 721–732. <https://doi.org/10.1108/JCM-04-2017-2175>

- Coulter, K. S., & Punj, G. (1999). Influence of Viewing Context on the Determinants of Attitude Toward the Ad and the Brand. *Journal of Business Research*, 45(1), 47–58.
[https://doi.org/10.1016/S0148-2963\(98\)00027-7](https://doi.org/10.1016/S0148-2963(98)00027-7)
- Davvetas, V., Diamantopoulos, A., & Liu, L. (2020). Lit Up or Dimmed Down? Why, When, and How Regret Anticipation Affects Consumers' Use of the Global Brand Halo. *Journal of International Marketing*, 28(3), 40–63.
<https://doi.org/10.1177/1069031X20910112>
- De Veirman, M., Cauberghe, V., & Hudders, L. (2017). Marketing through Instagram influencers: The impact of number of followers and product divergence on brand attitude. *International Journal of Advertising*, 36(5), 798–828.
<https://doi.org/10.1080/02650487.2017.1348035>
- Diener, F. (2023). *Stereotypes of age and gender in advertising. A quantitative image content analysis of selected magazine advertisements of the years 2000 and 2020*.
<https://open.fau.de/handle/openfau/21288>
- Drolet, A., & Yoon, C. (Eds.). (2020). *The Aging Consumer: Perspectives from Psychology and Marketing* (2nd ed.). Routledge. <https://doi.org/10.4324/9780429343780>
- Eastin, M. S., & Lee, J. A. (2020). Attitudes Toward Advertisements and Brands. In *The International Encyclopedia of Media Psychology* (pp. 1–6). John Wiley & Sons, Ltd.
<https://doi.org/10.1002/9781119011071.iemp0187>
- Eisend, M. (2022). Older People in Advertising. *Journal of Advertising*, 51(3), 308–322.
<https://doi.org/10.1080/00913367.2022.2027300>
- Eisend, M., Muldrow, A. F., & Rosengren, S. (2023). Diversity and inclusion in advertising research. *International Journal of Advertising*, 42(1), 52–59.
<https://doi.org/10.1080/02650487.2022.2122252>

- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). *Comparison of Convenience Sampling and Purposive Sampling*.
- Ewing, D. R., Allen, C. T., & Ewing, R. L. (2012). Authenticity as meaning validation: An empirical investigation of iconic and indexical cues in a context of “green” products. *Journal of Consumer Behaviour*, 11(5), 381–390. <https://doi.org/10.1002/cb.1382>
- Fritz, K., Schoenmueller, V., & Bruhn, M. (2017). Authenticity in branding – exploring antecedents and consequences of brand authenticity. *European Journal of Marketing*, 51(2), 324–348. <https://doi.org/10.1108/EJM-10-2014-0633>
- Gardner, M. P. (1985). Does Attitude toward the Ad Affect Brand Attitude under a Brand Evaluation Set? *Journal of Marketing Research*, 22(2), 192–198. <https://doi.org/10.2307/3151364>
- Greco, A. J. (1988). The Elderly as Communicators: Perceptions of Advertising Practitioners. *Journal of Advertising Research*, 28(3), 39–46. <https://doi.org/10.1080/00218499.1988.12467752>
- Greco, A. J. (1989a). Representation Of The Elderly In Advertising: Crisis or Inconsequence? *The Journal of Consumer Marketing*, 6(1), 37.
- Greco, A. J. (1989b). Representation of the elderly in advertising: Crisis or inconsequence? *The Journal of Consumer Marketing*, 6(1), 37. <https://doi.org/10.1108/EUM0000000002538>
- Greco, A. J., Swayne, L. E., & Johnson, E. B. (1997). Will Older Models Turn Off Shoppers? *International Journal of Advertising*, 16(1), 27–36. <https://doi.org/10.1080/02650487.1997.11104671>
- Gresham, L. G., & Shimp, T. A. (1985). Attitude toward the Advertisement and Brand Attitudes: A Classical Conditioning Perspective. *Journal of Advertising*, 14(1), 10–49.

- Hayes, A. F. (2022). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Publications.
<http://ebookcentral.proquest.com/lib/univie/detail.action?docID=6809031>
- Huber, F., Meyer, F., Vogel, J., Weihrauch, A., & Hamprecht, J. (2013). Endorser age and stereotypes: Consequences on brand age. *Journal of Business Research*, 66(2), 207–215. <https://doi.org/10.1016/j.jbusres.2012.07.014>
- Ilicic, J., Baxter, S. M., & Kulczynski, A. (2018). Spot the difference: Examining facial characteristics that enhance spokesperson effectiveness. *European Journal of Marketing*, 52(1/2), 348–366. <https://doi.org/10.1108/EJM-03-2017-0226>
- Ilicic, J., Webster, C. M., & Ang, L. (2012). Exploring Dimensions of Brand Authenticity. *Asia-Pacific Advances in Consumer Research*, 10, 1–4.
<https://www.proquest.com/docview/3168431512/abstract/7DEA2B0396FA4346PQ/1>
- Kim, K., Lee, S., & Choi, Y. K. (2019). Image proximity in advertising appeals: Spatial distance and product types. *Journal of Business Research*, 99, 490–497.
<https://doi.org/10.1016/j.jbusres.2017.08.031>
- Li, C., & Ali, K. (2021). Measuring attitude toward the ad: A test of using arbitrary scales and “ $p < .05$ ” criterion. *International Journal of Market Research*, 63(5), 620–634.
<https://doi.org/10.1177/1470785320949844>
- Liu, P., & Li, S. (2024). *Where Less Is More? The Effect of White Space and Product Image Dynamism on Consumer Attitudes Toward Advertisement*.
<https://doi.org/10.1177/21582440241294129>
- Long, N. (1998). Broken down by age and sex—Exploring the ways we approach the elderly consumer. *Market Research Society. Journal of the Market Research Society*, 40(2), 73–91.

- Lutz, R. J. (1985). Affective and Cognitive Antecedents of Attitude Toward the Ad: A Conceptual Framework. In *Psychological Processes and Advertising Effects*. Routledge.
- Lutz, R. J., McKenzie, S. B., & Belch, G. E. (1983). ATTITUDE TOWARD THE AD AS A MEDIATOR OF ADVERTISING EFFECTIVENESS: DETERMINANTS AND CONSEQUENCES. *Advances in Consumer Research*, 10(1), 532–539. (6430895).
- Lynch, J. G. (1982). On the External Validity of Experiments in Consumer Research. *Journal of Consumer Research*, 9(3), 225–239.
- Lynn, SudburyDr., & Simcock, P. (2006). The invisible majority? Older models in UK television advertising. *International Journal of Advertising*, 25(1), 87–106.
<https://doi.org/10.1080/02650487.2006.11072953>
- Machado, C. M., & Sousa, J. P. (2019). Stereotypes of Old Age: Views on the Elderly in Brazilian Advertising. *Medijske Studije = Media Studies*, 10(20), 69–88.
<https://doi.org/10.20901/ms.10.20.4>
- MacKenzie, S. B., & Lutz, R. J. (1989). An Empirical Examination of the Structural Antecedents of Attitude toward the Ad in an Advertising Pretesting Context. *Journal of Marketing*, 53(2), 48–65. <https://doi.org/10.2307/1251413>
- MacKenzie, S. B., Lutz, R. J., & Belch, G. E. (1986). The Role of Attitude toward the Ad as a Mediator of Advertising Effectiveness: A Test of Competing Explanations. *Journal of Marketing Research*, 23(2), 130–143.
<https://doi.org/10.1177/002224378602300205>
- Malhotra, N. K. (2020). *Marketing research: An applied orientation* (Seventh edition, global edition). Pearson.

- Mazis, M. B., Ringold, D. J., Perry, E. S., & Denman, D. W. (1992). Perceived Age and Attractiveness of Models in Cigarette Advertisements. *Journal of Marketing*, 56(1), 22–37. <https://doi.org/10.1177/002224299205600104>
- McCracken, G. (1989). Who is the Celebrity Endorser? Cultural Foundations of the Endorsement Process. *Journal of Consumer Research*, 16(3), 310–321.
- Mecredy, P., Stocchi, L., & Feetham, P. (2025). Differences in advertising's effectiveness across age groups. *International Journal of Advertising*, 44(2), 235–262. <https://doi.org/10.1080/02650487.2024.2370678>
- Milliman, R. E., & Erffmeyer, R. C. (1989). Improving Advertising Aimed at Seniors. *Journal of Advertising Research*, 29(6), 31–35. <https://doi.org/10.1080/00218499.1989.12467676>
- Miniard, P. W., Bhatla, S., & Rose, R. L. (1990). On the Formation and Relationship of Ad and Brand Attitudes: An Experimental and Causal Analysis. *Journal of Marketing Research*, 27(3), 290–303. <https://doi.org/10.1177/002224379002700304>
- Mitchell, A. A., & Olson, J. C. (1981). Are Product Attribute Beliefs the Only Mediator of Advertising Effects on Brand Attitude? *Journal of Marketing Research*, 18(3), 318–332. <https://doi.org/10.2307/3150973>
- Mittal, B. (1990). The Relative Roles of Brand Beliefs and Attitude toward the ad as Mediators of Brand Attitude: A Second Look. *Journal of Marketing Research*, 27(2), 209–219. <https://doi.org/10.1177/002224379002700208>
- Mohan, M., Ferguson, J. L., & Huhmann, B. A. (2022). Endorser gender and age effects in B2B advertising. *Journal of Business Research*, 148, 60–75. <https://doi.org/10.1016/j.jbusres.2022.04.050>

- Morhart, F., Malär, L., Guèvremont, A., Girardin, F., & Grohmann, B. (2015). Brand authenticity: An integrative framework and measurement scale. *Journal of Consumer Psychology*, 25(2), 200–218. <https://doi.org/10.1016/j.jcps.2014.11.006>
- Moulard, J. G., Raggio, R. D., & Folse, J. A. G. (2016). Brand Authenticity: Testing the Antecedents and Outcomes of Brand Management's Passion for its Products. *Psychology & Marketing*, 33(6), 421–436. <https://doi.org/10.1002/mar.20888>
- Moulard, J. G., Raggio, R. D., & Folse, J. A. G. (2021). Disentangling the meanings of brand authenticity: The entity-referent correspondence framework of authenticity. *Journal of the Academy of Marketing Science*, 49(1), 96–118. <https://doi.org/10.1007/s11747-020-00735-1>
- Munnukka, J., Uusitalo, O., & Toivonen, H. (2016). Credibility of a peer endorser and advertising effectiveness. *Journal of Consumer Marketing*, 33(3), 182–192. <https://doi.org/10.1108/JCM-11-2014-1221>
- Napoli, J., Dickinson, S. J., Beverland, M. B., & Farrelly, F. (2014). Measuring consumer-based brand authenticity. *Journal of Business Research*, 67(6), 1090–1098. <https://doi.org/10.1016/j.jbusres.2013.06.001>
- Napoli, J., Dickinson-Delaporte, S., & Beverland, M. B. (2016). The brand authenticity continuum: Strategic approaches for building value. *Journal of Marketing Management*, 32(13–14), 1201–1229. <https://doi.org/10.1080/0267257X.2016.1145722>
- Population Pyramids of the World from 1950 to 2100*. (n.d.-a). PopulationPyramid.Net. Retrieved March 15, 2026, from <https://www.populationpyramid.net/world/2026/>

- Population Pyramids of the World from 1950 to 2100*. (n.d.-b). PopulationPyramid.Net.
Retrieved March 15, 2026, from <https://www.populationpyramid.net/world/2026/>
- Raziq, M. M., Ahmed, Q. M., Ahmad, M., Yusaf, S., Sajjad, A., & Waheed, S. (2018). Advertising skepticism, need for cognition and consumers' attitudes. *Marketing Intelligence & Planning*, 36(6), 678–693. <https://doi.org/10.1108/MIP-11-2017-0273>
- Reto, F., & Adilson, B. (2014). Celebrity endorser attractiveness, visual attention, and implications for ad attitudes and brand evaluations: A replication and extension. *Journal of Brand Management*, 21(7–8), 579–593.
<https://doi.org/10.1057/bm.2014.24>
- Rosenthal, B., Cardoso, F., & Abdalla, C. (2021). (Mis)Representations of older consumers in advertising: Stigma and inadequacy in ageing societies. *Journal of Marketing Management*, 37(5–6), 569–593. <https://doi.org/10.1080/0267257X.2020.1850511>
- Sadasivan, A. (2019). Attitude Towards Advertisements: An Empirical Study on the Antecedents. *International Journal of Marketing & Business Communication*, 8(1), 15–24.
- Shahriari, E., Abbassi, H., Torres, I. M., Zúñiga, M. Á., & Alfayez, N. (2023). A cultural perspective on the effects of comprehension and slogan meaning types on attitude toward the advertisement and brand. *Journal of Consumer Marketing*, 40(7), 983–1001. <https://doi.org/10.1108/JCM-07-2020-3951>
- Shimp, T. A. (1981). Attitude toward the Ad as a Mediator of Consumer Brand Choice. *Journal of Advertising*, 10(2), 9–48.
- Södergren, J. (2021). Brand authenticity: 25 Years of research. *International Journal of Consumer Studies*, 45(4), 645–663. <https://doi.org/10.1111/ijcs.12651>

- Spears, N., & Singh, S. N. (2004). Measuring Attitude toward the Brand and Purchase Intentions. *Journal of Current Issues & Research in Advertising*, 26(2), 53–66.
<https://doi.org/10.1080/10641734.2004.10505164>
- Spiggle, S., Nguyen, H. T., & Caravella, M. (2012). More than Fit: Brand Extension Authenticity. *Journal of Marketing Research*, 49(6), 967–983.
<https://doi.org/10.1509/jmr.11.0015>
- Stolz, S. (2026). *The impact of stereotypical portrayals of older endorsers on consumer perceptions and attitudes* [University of Vienna].
<https://doi.org/10.25365/thesis.80994>
- Till, B. D., & Busler, M. (2000). The Match-Up Hypothesis: Physical Attractiveness, Expertise, and the Role of Fit on Brand Attitude, Purchase Intent and Brand Beliefs. *Journal of Advertising*, 29(3), 1–13.
<https://doi.org/10.1080/00913367.2000.10673613>
- Turan, C. P. (2022). Deal or deny: The effectiveness of crisis response strategies on brand equity of the focal brand in co-branding. *Journal of Business Research*, 149, 615–629.
<https://doi.org/10.1016/j.jbusres.2022.05.053>
- Uduehi, E., Saint Clair, J. K., Hamilton, M., & Reed, A. (2025). When Diversity Backfires: The Asymmetric Role of Multicultural Diversity on Brand Perception. *The Journal of Consumer Research*, 52(2), 330–350. <https://doi.org/10.1093/jcr/ucae068>
- Williams, A., Yläanne, V., Wadleigh, P. M., & Chen, C.-H. (2010). Portrayals of older adults in UK magazine advertisements: Relevance of target audience. *Communications*, 35(1), 1–27. <https://doi.org/10.1515/comm.2010.001>
- Wolf, F., Sandner, P., & Welp, I. M. (2014). Why Do Responses to Age-Based Marketing Stimuli Differ? The Influence of Retirees' Group Identification and Changing

Consumption Patterns. *Psychology & Marketing*, 31(10), 914–931. (98020992).

<https://doi.org/10.1002/mar.20743>

Ylänne, V. (2021). UK magazine advertising portrayals of older adults: A longitudinal, content analytic, and a social semiotic lens. *International Journal of Ageing and Later Life*, 15(1), 7–38. <https://doi.org/10.3384/ijal.1652-8670.1700>

Zhang, Y. B., Harwood, J., Williams, A., Ylänne-McEwen, V., Wadleigh, P. M., & Thimm, C. (2006). The Portrayal of Older Adults in Advertising: A Cross-National Review. *Journal of Language and Social Psychology*, 25(3), 264–282. <https://doi.org/10.1177/0261927X06289479>

Appendices

Appendix A Survey Questionnaire

The following section provides an overview of the survey questionnaire in the form in which it was presented to participants. Respondents were randomly assigned to one of two experimental conditions. In the first condition, participants viewed an advertisement featuring a younger model, whereas in the second condition, participants viewed an advertisement featuring an older model. For ease of reference, the survey pages have been numbered according to the order in which they were presented to participants during the experiment.

Page 1: Introduction and Informed Consent

Welcome and thank you for your interest in this study.

You are invited to participate in a study conducted as part of my master's thesis at the University of Vienna.

The purpose of this study is to examine how consumers perceive advertisements and evaluate brands. You will be asked to view an advertisement and answer a series of questions about your impressions.

Your participation is voluntary and will take approximately 3–5 minutes.

All responses are anonymous and will be treated confidentially. The data will be used exclusively for academic purposes.

By proceeding, you confirm that:

- You are between 18 and 30 years old
- You voluntarily agree to participate in this study

Thank you very much for your support!

In case you have any questions or concerns feel free to reach out to {...}.

Page 2: Advertisement Stimulus (RD01)

Instruction: Please carefully view the following advertisement before continuing.

(Advertisement Image displayed – Condition 1 or Condition 2, depending on randomization)

Page 3: Attention Check (AC01)

Question: Which product category was shown in the advertisement?

Response Options:

- Coffee
- Tea
- Energy drinks
- Chocolate
- I don't remember

Response format: Single-choice question.

Correct response: Coffee

Note: The order in which the responses appeared to the individual participants was randomized each time.

Page 4: Attitude towards the Advertisement (A_{Ad}) (AA01_01-AA01_06)

Instruction:

Please indicate your overall evaluation of the ADVERTISEMENT.

For each pair of adjectives, select the option that best reflects your opinion.

My overall evaluation of the ADVERTISEMENT is:

Item Code	Item Wording
AA01_01	Bad - Good
AA01_02	Unfavorable - Favorable
AA01_03	Unpleasant - Pleasant
AA01_04	Unappealing - Appealing
AA01_05	Not likeable - Likable
AA01_06	Not interesting - Interesting

Response format: 7-point semantic differential scale.

Page 5: Perceived Brand Authenticity (PBA) (BA01_01-BA01_07)

Instruction: Please indicate to what extent you agree with the following statements about the BRAND Novara.

Item Code	Item Wording
BA01_01	Novara appears as a brand that gives back to its consumers.
BA01_02	Novara appears as a brand with moral principles.
BA01_03	Novara appears as a brand true to a set of moral values.
BA01_04	Novara appears as a brand that cares about its consumers.

BA01_05	Novara appears as a brand that will not betray you.
BA01_06	Novara appears as a brand that accomplishes its value promise.
BA01_07	Novara appears as an honest brand.

Response format: 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Page 6: Brand Attitude (BA) (BT01_01-BT01_05)

Instruction: Please indicate your overall feelings of the BRAND.

For each pair of adjectives, select the option that best reflects your opinion.

Please describe your overall feelings about the BRAND in the advertisement that you just saw.

Item Code	Item Wording
BT01_01	Unappealing - Appealing
BT01_02	Bad - Good
BT01_03	Unpleasant - Pleasant
BT01_04	Unfavorable - Favorable
BT01_05	Unlikable - Likable

Response format: 7-point semantic differential scale.

Page 7: Perceived Model Age and Perceived Age Fit – Manipulation Check (MC01-MC03)

Perceived Age of the Model (MC01):

Question: How old do you think the person in the advertisement is?

Response options:

- Under 30
- 30-44
- 45-59
- 60 or older
- I don't remember

Response format: Single-choice question.

Perceived Model Age (MC02):

Item Code	Item Wording
MC02	The person in the advertisement appears...

Response format: 7-point semantic differential scale ranging from 1 (very young) to 7 (very old).

Perceived Age Fit (MC03):

Item Code	Item Wording
MC03	The person in the advertisement fits my age group.

Response format: 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Page 8: Demographic Variables (DE01, DE02, DE03, DE04)

Item Code	Item Wording	Response Format
DE01	How old are you? (In years)	Open-ended numeric response
DE02	What is your gender?	Single-choice question
DE03	What is your highest completed level of education?	Single-choice question
DE04	What is your nationality? (Please answer with country name, e.g. Austria)	Open-ended text response

Gender response options:

- Female
- Male
- Other
- Prefer not to say

Education response options:

- No formal qualification
- Compulsory school (e.g., primary/lower secondary school)
- Apprenticeship / vocational training
- High school diploma (e.g., A-levels / Abitur / Matura)
- Bachelor's degree
- Master's or diploma degree
- Doctorate / PhD

Page 9: Survey Completion Page

Thank you for your participation! :)

Your answers were submitted, you may close the browser window or tab now.

Appendix B Experimental Stimuli

The following figures display the advertising stimuli used in the experiment. Participants were randomly assigned to view either an advertisement featuring the younger model (Condition 1) or the older model (Condition 2). In both figures, only the model age was manipulated; all other visual and textual elements were kept identical.

Figure B1. Advertisement featuring the younger model (Condition 1).



Figure B2. Advertisement featuring the older model (Condition 2).



Note. The advertising stimuli were developed specifically for this study using the AI-generated images. Further details to the creation are provided in Section 3.2.

Appendix C Sample Characteristics & Manipulation Checks

This appendix presents additional descriptive statistics for the study sample. It includes the sample's demographic characteristics and manipulation checks for model age. These analyses complement the sample description provided in Section 3.4.

Tabel C1. Age Distribution of the Sample

Age	n	%	Valid %	Cumulative %
18	11	6.7	6.7	6.7
19	5	3.1	3.1	9.8
20	15	9.2	9.2	19.0
21	14	8.6	8.6	27.6
22	12	7.4	7.4	35.0
23	23	14.1	14.1	49.1
24	23	14.1	14.1	63.2
25	14	8.6	8.6	71.8
26	13	8.0	8.0	79.8
27	13	8.0	8.0	87.7
28	9	5.5	5.5	93.3
29	6	3.7	3.7	96.9
30	5	3.1	3.1	100.0
Total	163	100.0	100.0	

Note. $N = 163$.

Tabel C2. Gender Distribution of the Sample

Gender	n	%	Valid %	Cumulative %
Female	106	65.0	65.0	65.0
Male	54	33.1	33.1	98.2
Other	2	1.2	1.2	99.4
Prefer not to say	1	0.6	0.6	100.0
Total	163	100.0	100.0	

Note. $N = 163$.

Tabel C3. Educational Attainment of Participants

Education	n	%	Valid %	Cumulative %
No formal qualification	1	0.6	0.6	0.6
Compulsory school (e.g., primary/lower secondary school)	3	1.8	1.8	2.5

Apprenticeship/vocational training	1	0.6	0.6	3.1
High school diploma (e.g., A-levels/Abitur/Matura)	65	39.9	39.9	42.9
Bachelor's degree	68	41.7	41.7	84.7
Master's or diploma degree	25	15.3	15.3	100.0
Total	163	100.0	100.0	

Tabel C4. Nationality of Participants

Nationality	n	%	Valid %	Cumulative %
Afghanistan	2	1.2	1.2	1.2
AT	2	1.2	1.2	2.5
Austria	85	52.1	52.1	54.6
Austria/Australia	1	.6	.6	55.2
Austria/Brazil	1	.6	.6	55.8
Belgium	1	.6	.6	56.4
Bosnia and Herzegovina	1	.6	.6	57.1
Brazil	1	.6	.6	57.7
British	1	.6	.6	58.3
Canada	1	.6	.6	58.9
Croatia	1	.6	.6	59.5
Deutschland	1	.6	.6	60.1
Estonia	1	.6	.6	60.7
France	1	.6	.6	61.3
Georgia	1	.6	.6	62.0
German	2	1.2	1.2	63.2
Germany	20	12.3	12.3	75.5
Hungarian	1	.6	.6	76.1
Hungary	1	.6	.6	76.7
Irish	1	.6	.6	77.3
Italian	1	.6	.6	77.9
Italy	2	1.2	1.2	79.1
Kazakhstan	1	.6	.6	79.8
Kosova	1	.6	.6	80.4
Kosovo	1	.6	.6	81.0
Kyrgyzstan	1	.6	.6	81.6

Malaysia	1	.6	.6	82.2
Netherlands	1	.6	.6	82.8
Österreich	2	1.2	1.2	84.0
Poland	2	1.2	1.2	85.3
Portuguese	1	.6	.6	85.9
Romania	1	.6	.6	86.5
Russia	5	3.1	3.1	89.6
Russian	1	.6	.6	90.2
Serbia	2	1.2	1.2	91.4
Slovak	1	.6	.6	92.0
Slovakia	1	.6	.6	92.6
Spain	1	.6	.6	93.3
Syria	1	.6	.6	93.9
Taiwan	2	1.2	1.2	95.1
Ukraine	5	3.1	3.1	98.2
United states	1	.6	.6	98.8
Vietnam	2	1.2	1.2	100.0
Total	163	100.0	100.0	

Note. $N = 163$.

Tabel C5. Participant Exclusion Criteria and Final Sample

Exclusion Criteria	Cases (n)
Initial responses	227
Incomplete questionnaires	47
Failed attention check	9
Outside target age range	5
Invalid demographic responses	3
Final sample	163

Note. $N = 163$.

Tabel C6. Perceived Model Age by Experimental Condition (MC01)

Perceived Age	Younger model n (%)	Older model n (%)	Total n (%)
Under 30	46 (56.8)	12 (14.6)	58 (35.6)
30-44	31 (38.3)	30 (36.6)	61 (37.4)
45-59	2 (2.5)	39 (47.6)	41 (25.2)
60+	0 (0.0)	1 (1.2)	1 (0.6)
Don't remember	2 (2.5)	0 (0.0)	2 (1.2)
Total	81 (100.0)	82 (100.0)	163 (100.0)

Note. $N = 163$.

Tabel C7. Perceived Model Age Ratings by Experimental Condition (MC02)

Perceived Model Age	Younger model n (%)	Older model n (%)	Total n (%)
Very young	1 (1.2)	0 (0.0)	1 (0.6)
Young	15 (18.5)	0 (0.0)	15 (9.2)
Somewhat young	47 (58.0)	9 (11.0)	56 (34.4)
Neutral	14 (17.3)	29 (35.4)	43 (26.4)
Somewhat old	4 (4.9)	37 (45.1)	41 (25.2)
Old	0 (0.0)	7 (8.5)	7 (4.3)
Very old	0 (0.0)	0 (0.0)	0 (0.0)
Total	81 (100.0)	82 (100.0)	163 (100.0)

Note. $N = 163$. Response options ranged from 1 = very young to 7 = very old on a 7-point Likert scale.

Tabel C8. Perceived Age Fit by Experimental Condition (MC03)

Perceived Model Age	Younger model n (%)	Older model n (%)	Total n (%)
Strongly disagree	3 (3.7)	40 (48.8)	43 (26.4)
Disagree	15 (18.5)	19 (23.2)	34 (20.9)
Somewhat disagree	15 (18.5)	9 (11.0)	24 (14.7)
Neutral	7 (8.6)	7 (8.5)	14 (8.6)
Somewhat agree	9 (11.1)	3 (3.7)	12 (7.4)
Agree	20 (24.7)	3 (3.7)	23 (14.1)
Strongly agree	12 (14.8)	1 (1.2)	13 (8.0)
Total	81 (100.0)	82 (100.0)	163 (100.0)

Note. $N = 163$. Response options ranged from 1 = strongly disagree to 7 = strongly agree on a 7-point Likert scale.

Appendix D PROCESS Output

This Appendix presents the complete statistical output used for the hypothesis testing in Section 4.3. The analyses were conducted using Hayes's (2022) PROCESS Macro Version 5.0 (Model 4). The analyses were set to employ 5,000 bootstrap resamples and 95% bias-corrected confidence intervals. Model age (0 = younger model, 1 = older model) served as the independent variable, attitude toward the advertisement as the mediator, and perceived brand authenticity and brand attitude were each set separately as the dependent variables.

PROCESS Output: Perceived Brand Authenticity

Run MATRIX procedure:

Copyright 2013-2025 by Andrew F. Hayes. ALL RIGHTS RESERVED.
This version of PROCESS requires SPSS version 26 or later
Workshop schedule available at haskayne.ucalgary.ca/CCRAM
In SPSS 29 and later, change default output font to Courier New for tidier
output. More information about PROCESS at processmacro.org/faq.html.
This beta release has not been completely tested. Use at your own risk.

***** PROCESS Procedure for SPSS Version 5.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model: 4
Y: BranAuth
X: RD01
M: Aad

Covariates:
DE01_01

Sample
Size: 163

OUTCOME VARIABLE:
Aad

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.3178	.1010	1.1540	8.9876	2.0000	160.0000	.0002

Model						
	coeff	se	t	p	LLCI	ULCI
constant	1.9183	.7282	2.6343	.0093	.4802	3.3564
RD01	.0096	.1699	.0563	.9552	-.3260	.3452
DE01_01	.1145	.0272	4.2062	.0000	.0607	.1682

Some regression diagnostics

	Min.	Max.
fitted	3.9880	5.3711
residual	-3.0699	2.7830
t-resid	-2.9434	2.6705

Shape of residuals

	Skewness	Kurtosis
Value	-.1932	.1722
se	.1901	.3780

Bonferroni-corrected p for largest t-residual

t-resid	p-value	casenum
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```

-2.9434      .6084      82.0000

Most influential observations
      casenum      dfbeta
constant    91.0000      .2540
RD01        91.0000     -.0416
DE01_01     66.0000     -.0100

Variable tolerance and VIF
      Tol.      VIF
RD01      .9808      1.0196
DE01_01   .9808      1.0196

Breusch-Pagan test of heteroskedasticity
      Chi-sq      df      p
Normal    .4710      2.0000    .7902
Robust     .4422      2.0000    .8016

*****

OUTCOME VARIABLE:
  BranAuth

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .5431      .2949      .7215     22.1697      3.0000     159.0000    .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant    3.8395    .5881    6.5283    .0000    2.6779    5.0010
RD01         .0118    .1344    .0875    .9304   -.2536    .2771
Aad          .5020    .0625    8.0316    .0000    .3786    .6255
DE01_01     -.0871    .0227   -3.8430    .0002   -.1319   -.0424

-----
Some regression diagnostics

      Min.      Max.
fitted    2.6119    5.6228
residual  -2.6930    1.8098
t-resid   -3.2886    2.1846

Shape of residuals
      Skewness      Kurtosis
Value    -.5002      .5666
se        .1901      .3780

Bonferroni-corrected p for largest t-residual
      t-resid      p-value      casenum
      -3.2886      .2023     116.0000

Most influential observations
      casenum      dfbeta
constant    11.0000      .2188
RD01       119.0000     -.0376
Aad        66.0000      .0244
DE01_01    66.0000     -.0096

Variable tolerance and VIF
      Tol.      VIF
RD01      .9807      1.0196
Aad       .8990      1.1123
DE01_01   .8831      1.1324

Breusch-Pagan test of heteroskedasticity
      Chi-sq      df      p
Normal    1.6916      3.0000    .6388
Robust     1.3464      3.0000    .7181

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:
  BranAuth

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .0942      .0089      1.0078      .7170      2.0000     160.0000    .4898

```

Model	coeff	se	t	p	LLCI	ULCI
constant	4.8026	.6805	7.0573	.0000	3.4586	6.1465
RD01	.0166	.1588	.1043	.9171	-.2971	.3302
DE01_01	-.0297	.0254	-1.1669	.2450	-.0799	.0205

Some regression diagnostics

	Min.	Max.
fitted	3.9289	4.3015
residual	-3.1069	2.2085
t-resid	-3.2030	2.2478

Shape of residuals

	Skewness	Kurtosis
Value	-.5078	.9989
se	.1901	.3780

Bonferroni-corrected p for largest t-residual

t-resid	p-value	Casenum
-3.2030	.2678	19.0000

Most influential observations

	casenum	dfbeta
constant	119.0000	.2760
RD01	119.0000	-.0460
DE01_01	66.0000	-.0116

Variable tolerance and VIF

	Tol.	VIF
RD01	.9808	1.0196
DE01_01	.9808	1.0196

Breusch-Pagan test of heteroskedasticity

	Chi-sq	df	p
Normal	1.3057	2.0000	.5206
Robust	.8907	2.0000	.6406

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
.0166	.1588	.1043	.9171	-.2971	.3302

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.0118	.1344	.0875	.9304	-.2536	.2771

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
Aad	.0048	.0846	-.1637

Cases with greatest influence on indirect effect(s):

	casenum	dfb_ie
Aad	91.0000	-.0210

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for bias-corrected bootstrap confidence intervals:

5000

----- END MATRIX -----

PROCESS Output: Brand Attitude

Run MATRIX procedure:

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This version of PROCESS requires SPSS version 26 or later
 Workshop schedule available at haskayne.ucalgary.ca/CCRAM
 In SPSS 29 and later, change default output font to Courier New for tidier
 output. More information about PROCESS at processmacro.org/faq.html.
 This beta release has not been completely tested. Use at your own risk.

***** PROCESS Procedure for SPSS Version 5.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model: 4
 Y: BranAtti
 X: RD01
 M: Aad

Covariates:
 DE01_01

Sample
 Size: 163

OUTCOME VARIABLE:
 Aad

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.3178	.1010	1.1540	8.9876	2.0000	160.0000	.0002

Model	coeff	se	t	p	LLCI	ULCI
constant	1.9183	.7282	2.6343	.0093	.4802	3.3564
RD01	.0096	.1699	.0563	.9552	-.3260	.3452
DE01_01	.1145	.0272	4.2062	.0000	.0607	.1682

 Some regression diagnostics

	Min.	Max.
fitted	3.9880	5.3711
residual	-3.0699	2.7830
t-resid	-2.9434	2.6705

Shape of residuals

	Skewness	Kurtosis
Value	-.1932	.1722
se	.1901	.3780

Bonferroni-corrected p for largest t-residual

t-resid	p-value	casenum
-2.9434	.6084	82.0000

Most influential observations

	casenum	dfbeta
constant	91.0000	.2540
RD01	91.0000	-.0416
DE01_01	66.0000	-.0100

Variable tolerance and VIF

	Tol.	VIF
RD01	.9808	1.0196
DE01_01	.9808	1.0196

Breusch-Pagan test of heteroskedasticity

	Chi-sq	df	p
Normal	.4710	2.0000	.7902
Robust	.4422	2.0000	.8016

OUTCOME VARIABLE:
 BranAtti

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.7484	.5601	.5632	67.4785	3.0000	159.0000	.0000

Model						
	coeff	se	t	p	LLCI	ULCI
constant	1.6942	.5196	3.2605	.0014	.6680	2.7205
RD01	-.0012	.1187	-.0102	.9919	-.2357	.2332
Aad	.7623	.0552	13.8025	.0000	.6532	.8714
DE01_01	-.0221	.0200	-1.1035	.2715	-.0617	.0175

Some regression diagnostics

	Min.	Max.
fitted	2.3268	6.5869
residual	-3.1220	1.6593
t-resid	-4.4799	2.2531

Shape of residuals

	Skewness	Kurtosis
Value	-.5928	1.8330
se	.1901	.3780

Bonferroni-corrected p for largest t-residual

t-resid	p-value	casenum
-4.4799	.0023	119.0000

Most influential observations

	casenum	dfbeta
constant	119.0000	.2505
RD01	119.0000	-.0483
Aad	114.0000	-.0252
DE01_01	119.0000	-.0123

Variable tolerance and VIF

	Tol.	VIF
RD01	.9807	1.0196
Aad	.8990	1.1123
DE01_01	.8831	1.1324

Breusch-Pagan test of heteroskedasticity

	Chi-sq	df	p
Normal	4.4533	3.0000	.2165
Robust	2.3810	3.0000	.4972

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:
BranAtti

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.1817	.0330	1.2302	2.7299	2.0000	160.0000	.0683

Model						
	coeff	se	t	p	LLCI	ULCI
constant	3.1565	.7519	4.1983	.0000	1.6717	4.6414
RD01	.0061	.1754	.0347	.9724	-.3404	.3526
DE01_01	.0651	.0281	2.3186	.0217	.0097	.1206

Some regression diagnostics

	Min.	Max.
fitted	4.3351	5.1229
residual	-3.9926	2.5346
t-resid	-3.7998	2.3439

Shape of residuals

	Skewness	Kurtosis
Value	-.4296	.6802
se	.1901	.3780

Bonferroni-corrected p for largest t-residual

t-resid	p-value	Casenum
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-3.7998      .0335   119.0000

Most influential observations
      casenum   dfbeta
constant  119.0000   .3668
RD01      119.0000  -.0611
DE01_01   119.0000  -.0127

Variable tolerance and VIF
      Tol.      VIF
RD01      .9808   1.0196
DE01_01   .9808   1.0196

Breusch-Pagan test of heteroskedasticity
      Chi-sq      df      p
Normal    1.9375    2.0000   .3796
Robust     1.4774    2.0000   .4777

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y
      Effect      se      t      p      LLCI      ULCI
      .0061      .1754    .0347   .9724   -.3404    .3526

Direct effect of X on Y
      Effect      se      t      p      LLCI      ULCI
      -.0012      .1187   -.0102   .9919   -.2357    .2332

Indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
Aad      .0073      .1268      -.2507      .2451

Cases with greatest influence on indirect effect(s):
      casenum      dfb_ie
Aad      91.0000      -.0313

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for bias-corrected bootstrap confidence intervals:
5000

----- END MATRIX -----

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