The Influence of Product Presentation Type on Purchase Intention: The Roles of Aesthetic Appeal, Perceived Quality and Brand Type

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Abstract

This thesis examines how in-store product presentation formats shape consumers' purchase intentions in fashion retail, addressing uncertainty about the relative effectiveness of flat-lay, on-hanger and mannequin displays. Grounded in the Stimulus–Organism–Response framework and the Theory of Planned Behavior, the study investigates the mediating roles of aesthetic appeal and perceived quality, as well as moderating influences of brand type, gender and age. A two-stage pretest with focus groups and a pilot survey informed the development of realistic visual stimuli and refined measurement scales. The main experiment employed a 3×2 between-subjects online design (N = 323), exposing participants to one of six presentation brand combinations and measuring aesthetic appeal, perceived quality and purchase intention.

Analyses show that on-hanger and mannequin presentations generate higher purchase intentions than flat-lay displays, with large indirect effects via aesthetic appeal and perceived quality. Brand type and age do not moderate these relationships, while mannequins exert particularly strong effects on male respondents' purchase intentions. Theoretically, the study extends visual merchandising literature by isolating display format effects and providing evidence on the under-examined on-hanger format. Managerially, it recommends prioritizing hanger and mannequin displays over flat-lay arrangements across luxury and fast-fashion environments and emphasizes investment in high-quality presentation infrastructure as a cost-effective lever to enhance perceived aesthetics, signal quality and purchase intentions.

Keywords: Visual Merchandising, Product presentation, Brandtype, Aesthetic appeal, Perceived quality, Purchase intention

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Resumo

Esta tese examina como diferentes formatos de apresentação de produtos em loja influenciam a intenção de compra dos consumidores no retalho de moda, comparando exposições em plano, em cabides e em manequins. Com base no enquadramento Estímulo–Organismo–Resposta e na Teoria do Comportamento Planeado, o estudo analisa papéis mediadores do apelo estético e da qualidade percebida, bem como efeitos moderadores do tipo de marca, género e idade. Um pré-teste em duas fases, composto por grupos focais e um inquérito piloto, apoiou o desenvolvimento de estímulos visuais e de escalas de medição refinadas. O estudo principal adotou um desenho experimental online 3×2 entre sujeitos (N = 323), no qual os participantes foram expostos a diferentes combinações de formato de apresentação e tipo de marca.

Os resultados indicam que apresentações em cabides e em manequins geram intenções de compra significativamente mais elevadas do que exposições em plano, com efeitos indiretos mediados pelo apelo estético e qualidade percebida. O tipo de marca e a idade não moderam estas relações, enquanto os manequins apresentam efeitos mais fortes nas intenções de compra dos consumidores do sexo masculino. O estudo contribui para a literatura sobre merchandising visual e apresenta implicações de gestão para contextos de luxo e fast fashion.

Palavras-chave: Visual Merchandising, Apresentação do produto, Tipo de marca, Apelo estético, Qualidade percebida, Intenção de compra

Título: A influência do tipo de apresentação do produto na intenção de compra: os papéis do apelo estético, da qualidade percebida e do tipo de marca

Autora: Gabriela Mazzeo

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List of Abbreviations

α	Alpha
AE	Aesthetic
AE_score	Aesthetic score
age_d	age dummy
ANCOVA	Analysis of Covariance; statistical method combining regression and ANOVA to compare group means while controlling for covariates.
b	Regression coefficient
BootSE	Bootstrap Standard Error
Brand_D	Brand_Dummy
CI	Confidence Interval
F(df1, df2)	F-statistic with numerator (df1) and denominator (df2) degrees of freedom
F	F-statistic value without degrees of freedom
gender_d	gender dummy
H1	Hypothesis 1 (2-4b respectively)
Int1	Intermediate process results 1 (Int2 respectively)
M	Mediator variable in PROCESS
N	Total sample size
n	Subgroup sample size
η^2	Eta-Squared (Effect size: variance explained)
p	p-value
PI	Purchase intention
PI_score	Purchase intention score
PQ	Perceived Quality
Ptype_n	Presentationtype numeric
prest_f	Presentationtype final
r	Correlation coefficient

R^2	Multiple correlation squared
RQ1	Research Question
SD	Standard deviation
SE	Standard error
SPSS	Statistical Package for the Social Sciences (IBM SPSS)
SOR	Stimulus–Organism–Response model
TPB	Theory of Planned Behavior
W	Moderator variable in PROCESS
X	Independent variable / predictor
X_1 & X_2	Experimental Condition (visual product presentation format)
Y	Dependent variable / outcome

AI Disclaimer

This document has been reviewed using AI tools for linguistic refinement and clarity.

1. Introduction

The fashion retail sector generates substantial economic value and is a key contributor to global economic activity (Deloitte, 2025). Despite rapid growth in e-commerce, physical stores still dominate retail purchases. Around 76% of global transactions occur offline and this share is expected to remain above 70% by 2030 (Statista, 2025). This highlights the relevance of in-store experiences and the significant impact of visual merchandising on consumer behavior. In today's retail landscape marked by changing trends, intense competition from digital platforms and rising demand for immersive in-store experiences the strategic presentation of fashion products has taken on heightened importance (Verhoef et al., 2015; Alexander & Nobbs, 2020).

Within the fashion sector characterized by high visual involvement, rapid trend cycles and hedonic consumption product presentation serves as a particularly influential cue, guiding consumers' perceptions of quality, shaping aesthetic evaluations and affecting purchase intention (Park et al, 2015; Liapati et al., 2015). Retailers and brands face growing pressure to differentiate their physical environments not just to attract attention, but to create emotional resonance, communicate brand values and build lasting loyalty (Shahid et al., 2022; Mostafa & Kasamani, 2020). Product presentation ranging from mannequins to flat lay and on-hanger formats, plays a foundational role in attracting attention, conveying brand values, reducing perceived risk, helping product imagination, and shaping purchases (Cheng et al., 2022). Fashion purchases are strongly driven by visual impressions and emotional responses, the way items are displayed has substantial implications for consumer decision-making (Chen & Liu, 2024). Many fashion retailers struggle to understand which presentation formats most effectively activate desired consumer responses, as consumer expectations and competitor sophistication increase (Le, 2018). This represents a challenge at the intersection of consumer psychology, retail management and brand communication.

Despite the centrality of visual stimuli in fashion consumption, academic research has predominantly focused on online presentations ranging from website aesthetics to virtual fitting rooms, while the examination of offline product presentation formats remains comparatively limited (Ha & Lennon, 2010; Bonera & Corvi, 2014). When physical environments are addressed, studies often focus on atmospheric cues such as lighting, color, scent, or music, rather than on how fashion items are displayed at the point of sale (Basu et al., 2022). Making it difficult to isolate their direct effects on consumer responses. Furthermore, existing research typically focused on a narrow set of display types, usually comparing styled mannequins with

flat-lay arrangements, while neglecting the on-hanger format, even though it is the most encountered presentation in global fashion retail and has received very little empirical attention (Lindström et al., 2016).

An additional gap concerns the limited consideration of brand context. Luxury and fast fashion retailers operate under distinct symbolic and experiential principles: luxury brands rely on exclusivity, craftsmanship and aesthetic refinement, whereas fast-fashion brands emphasize trendiness, accessibility and speed (Joy et al., 2012). Consumers enter these environments with different expectations, making it plausible that identical presentation formats evoke different cognitive and emotional interpretations based on the brand context (Yoo, 2023). Yet empirical evidence examining brand-type moderation remains scarce (Wirtz et al., 2020). Finally demographic factors such as gender and age significantly influence visual processing and evaluative judgments (González et al., 2021; Meyers-Levy & Maheswaran, 1991). However, consumer heterogeneity is rarely integrated into studies on product presentation. Insufficient insight risks misaligning store strategies with consumer needs, potentially leading to suboptimal sales and brand experiences.

The central research problem therefore arises from a fragmented understanding of how offline product presentation formats influence consumer behavior. To address these gaps, this dissertation investigates how flat-lay, on-hanger and mannequin presentations shape consumer perceptions of quality, aesthetic appeal and purchase intention within physical fashion retail environments. It further investigates whether these effects differ between luxury and fast fashion contexts and how they may vary across consumer characteristics such as gender and age. In line with this purpose, the dissertation seeks to answer the following research questions:

- **RQ1:** How does the type of in-store product presentation in fashion retail (e.g., mannequin presentation vs. on-hanger vs. flat lay) influence consumers' purchase intention?
- **RQ2:** To what extent do perceived quality and aesthetic appeal mediate the relationship between product presentation format and consumers' purchase intention?
- **RQ3:** Does brand type (luxury vs. fast fashion) moderate the effects of product presentation on purchase intentions?
- **RQ4:** Do consumer characteristics (gender and age) moderate the effect of product presentation on purchase intention?

The study provides several key academic contributions: it presents new empirical evidence on the under-researched on-hanger format, systematically explores brand positioning and incorporates demographic variation by examining gender and age differences advancing understanding of how distinct consumer segments respond to visual merchandising.

To investigate these research questions, the dissertation employs a two-stage methodological design that combines qualitative and quantitative approaches. The focus groups served primarily to refine the stimulus material and inform the pretest. Building on these qualitative findings, the main empirical component consists of a controlled 3×2 between-subjects online experiment, designed to examine the effect of three Product Presentation formats (flat lay, on-hanger, and mannequin) on Purchase Intention. Quantitative analyses include a mediation model to assess the psychological mechanisms Aesthetic Appeal and Perceived Quality that link the presentation formats to purchase intention. Furthermore, moderation testing is used to examine how the effects are varied by Brand Type as well as demographic characteristics such as age and gender.

The dissertation is organized as follows. Chapter 2 presents the literature review, introducing core concepts of visual merchandising, product presentation formats (flat lay, on-hanger, mannequin), and psychological foundations such as the S-O-R model, Theory of Planned Behavior, aesthetic appeal, and perceived quality. It also discusses moderating factors including brand type and demographic differences. Chapter 3 describes the methodological approach, detailing the qualitative pre-study, the experimental design, measurement instruments, sampling strategy, and analytical procedures. In Chapter 4 the empirical results, relating them to existing theory and the conceptual framework are discussed. Chapter 5 concludes the dissertation by summarizing key findings, outlining theoretical and managerial implications, acknowledging limitations, and proposing avenues for future research.

2. Literature Review

2.1. Visual Merchandising and Product Presentation Formats in Fashion

Visual merchandising is defined as the art and science of designing products and sales areas in a way that they attract the consumers' attention, positively influence their purchasing behavior, and ultimately lead to higher sales (Chen & Liu, 2024). According to Soomro et al. (2017), Visual Merchandising promotes sales through the effective presentation of goods in retail stores. It has two major areas the store exterior and interior as well as elements like color combination, lighting scheme, product placement, store layout and design, furniture, and fixtures. All these factors play an important role in creating a favorable shopping atmosphere (Law et al., 2012).

The importance of visual merchandising lies in the fact that humans are primarily visual beings. Research shows that majority of purchase decisions are made in-store, under the influence of visual stimuli and product arrangement (Clement, 2007). Visual Merchandising plays a critical role in attracting attention and guiding consumer decisions (Ayudia, 2025). Effective visual presentation increases the time customers spend in-store, strengthens brand perception, and can even trigger impulse buying, defined as unplanned purchases driven by sensory appeal rather than rational evaluation (Bhatti & Latif, 2014). Within the broader framework of Visual Merchandising, product presentation represents a particularly critical element (Cheng et al., 2022). Product presentation is one of the most significant elements to attract attention with its visual appeal and subsequent impact on purchase intent in retail design (Law et al., 2012). The way products are visually presented determines how consumers evaluate them, shaping their perceptions of quality, style, and desirability (Ha & Lennon, 2010). Success in instore retailing may depend on visual product presentation and other merchandising techniques (Hefer & Cant, 2013).

Product presentations are designed to introduce products to consumers, to help consumers to form a clear understanding of products, and ideally, to impress consumers with superior or attractive product features (Jiang & Benbasat, 2007). Moreover, Vessey & Galletta (1991) suggest that different types of presentation formats significantly influence the quality of cognitive learning. This study focuses on three distinct presentation formats commonly used in retail: flat lay, on-hanger displays, and mannequin displays. Each format creates distinct visual

and tactile cues that influence how consumers perceive and evaluate products (Balaji et al., 2011).

2.1.1. Flat Lay

Typically, flat lay presentations show a clear and detailed view of fashion items on a flat background without distracting elements (Xia et al., 2020). Although this style is often seen as decorative, in fast fashion stores, folded clothes on tables or shelves are mainly for practical reasons (Morgan, 2015). This way of presenting products helps retailers, especially in fast fashion, show more items and sizes efficiently, making self-service shopping easier. Although folded displays facilitate stock accessibility and variety, they are less effective at capturing immediate consumer attention than vertically positioned on-hanger or mannequin displays. The latter utilizes the Central Level – Eye Level (120-160 cm), commonly known as the "Golden Zone," to direct the customer's gaze and concentrate attention (Yu Retail, 2025).

A key benefit of flat lay displays is that they encourage customers to touch and feel the materials. This experience lets buyers access the texture and quality of fabrics, which can increase their interest in buying (Mehta et al., 2024). Even though these displays may not be visually exciting, they can still offer an interactive experience supporting consumers' evaluation and decision-making.

Nevertheless, existing research identifies certain limitations associated with flat lay presentations in comparison to more immersive display formats. Studies demonstrate that products shown on models evoke stronger positive emotions and higher purchase intentions among consumers than those presented flat. This is because model-based imagery provides a more realistic representation of how apparel fits the human body and how garment fabric drapes (Boardman & Mccormick, 2019). While flat-lay presentations effectively communicate functional information and provide detailed product views, they appear less effective at fostering emotional engagement or helping consumers visualize how garments will appear when worn (Kim et al., 2009). This weaker emotional impact happens because these displays require more mental effort. As Zhao and Xia (2021) and Qu and Baek (2024) demonstrate, unassembled flat-lay presentations disrupt the mental simulation process that Escalas (2004) describes as central to purchase decisions, thereby making product evaluation more effortful and less intuitive. On the other hand, Kim and Forsythe (2008) find that three-dimensional

displays such as on-hanger or mannequin, provide both functional and hedonic value, lowering perceived risk and enhancing enjoyment.

These findings show that flat lay presentations are useful for their simplicity, authenticity, and attention to detail. However, they mainly serve practical purposes and may fall short in engaging the senses or emotions that encourage customers to buy fashion items. To build a stronger emotional connection and boost purchase intention, retailers often use more interactive displays, like mannequins to complement them with flat lay displays.

2.1.2. Mannequin

Mannequins play an essential role in retail fashion, connecting products and customers (Shealy, 2016). Mannequins allow shoppers to see how clothes, accessories, and other items look on a physical body, making it easier for them to relate to the products and imagine themselves wearing the garments (Lindström et al., 2016). By showcasing complete outfits, mannequins inspire customers with styling ideas and encourage faster purchase decisions (Murali et. al., 2022). The heart of mannequin effectiveness is the process of mental simulation (Yim et al., 2021). When consumers look at mannequins, they engage in an imaginative visualization process in which they mentally anticipate the fit and appearance of the fashion clothing on display, especially when there is considerable uncertainty about their purchasing decisions (Zhao & Xia, 2021). This process of mental simulation is crucial to the purchasing decision, as it helps consumers imagine how they themselves would look in the clothing (Escalas, 2004). That's why research shows that products presented on models/mannequins evoke more positive emotions and stronger purchase intentions to consumers compared to products laid out flat (Kim & Forsythe, 2008).

Yoo & Kim (2012) contend that coordinating complementary fashion products on mannequins is advantageous, as it aids consumers in understanding the attributes and usage of the target product. This advantage of ensemble display is supported by research from Zhao and Xia (2021), who found that the joint presentation of complementary items on a model leads to higher product ratings and purchase intentions than a separate presentation. This effect is mediated by the consumers' enhanced mental imagery and psychological ownership, seeing items assembled reinforces the idea of product use ('consumption imagery') and promotes a sense of 'ownership' even before purchase (Kamleitner & Feuchtl, 2015). The importance of visual harmony is elaborated by Lam and Mukherjee (2005), who showed that coordinated product presentation

improves consumer evaluation when products are both aesthetically coordinated and spatially placed next to each other. These findings reinforce Zhao and Xia (2021) by showing that it is not only joint versus separate presentation that is relevant, but also the quality of the coordination itself.

The effectiveness of mannequin displays is not uniform across all contexts and consumers, as shown by Lindström et al. (2016), who compared mannequins with heads and without. Their findings show that while mannequins with heads in physical stores increase purchase intent, headless mannequins can be more effective for consumers with a high level of fashion knowledge, as experts focus less on the mannequin's face and more on product details and accessories. This suggests that the mental simulation process described by Oh & Petrie (2012) and Escalas (2004) operates differently depending on consumer expertise. Building on Lindström et al. (2016) findings about the individual differences, Yim et al. (2021) investigated how the physical positioning of mannequins influences mental simulation from an embodied cognition perspective, revealing that situational factors are equally important. Their research demonstrates that the effectiveness of mannequin displays depends on the interaction between spatial positioning and consumers' shopping motivation. High-positioned mannequins generate greater mental simulation for hedonic shoppers, while utilitarian shoppers respond most effectively to mannequins that are both high and close. This suggests that the differences between different consumer groups identified by Lindström et al. (2016) are influenced not only by expertise but also by situational factors such as spatial arrangement and shopping goals.

Mannequins also shape how customers perceive product quality and social acceptability (Florea et al., 2025). Research indicates that mannequins offer many advantages in the retail context: 23% of customers prefer mannequins over trying on clothes in a fitting room, 46% appreciate the time saved, 54% believe mannequins improve their lifestyle choices, and 73% say mannequins influence their purchasing decisions (Florea et al., 2025). These findings underscore the mannequin’s enduring relevance as both a functional display tool and an emotional storytelling medium that connects customers with a brand’s aesthetic vision (Yim et al., 2021). While mannequins effectively facilitate mental simulation and outfit visualization through assembled product presentation, practical constraints including store space, product volume, and operational efficiency necessitate diverse display methods in fashion retail.

Taken together, these studies reveal that mannequins function as communication tools that tell stories about a store's products, style, and brand, and their role extends well beyond mere decoration to significantly affecting store purchases (Turley & Milliman, 2000).

2.1.3. On Hangers

The use of hangers for displaying clothing is among the most traditional and enduring methods in fashion retail, extending beyond basic functionality (Farrell-Beck et al., 2000). Their adoption not only improved inventory management but also marked a shift in retail practices toward self-service and systematic product organization. This advancement significantly increased the efficiency and visual coherence of in-store displays, establishing hangers as a foundational component of modern merchandising (Farrell-Beck et al., 2000).

Today on-hanger displays still play an important role alongside more elaborated display methods (Adhanom & Alvaro, 2023). They let customers touch, feel and try on products, providing a tactile dimension which is especially important in fashion retail where fabric and material quality matter (Rahman, 2012). How clothes are arranged on hangers whether by color, style, size, or collection affects customers' orientation and browsing behavior (Lam & Mukherjee, 2005). Clear, aesthetically pleasing arrangements encourage people to spend more time in the store and make unexpected or impulse purchases. This hands-on aspect sets on-hanger displays apart from static formats and is still a key part of the shopping experience.

Frontal display of clothing enables customers to view the entire product simultaneously, which facilitates quicker evaluations and minimizes the need to unfold or handle items (Kerfoot et al., 2003). Conversely, side-hanging displays are frequently employed in fast fashion stores to maximize spatial efficiency, allowing for the presentation of greater product volumes while preserving order and accessibility (Waters, 2019). Retailers often combine hanging displays with complementary product groupings to encourage cross-selling by presenting complete looks and prompting additional purchases (Varley, 2014).

Hangers do more than just serve a practical purpose; they also help shape a brand’s identity. The material of the hanger and how closely clothes are displayed send subtle messages about how products are presented and how exclusive they are (Debenedetti et al., 2025; Hangers of London, 2024). Luxury retailers often choose high-quality hangers to show off craftsmanship and attention to detail, whereas fast fashion chains rely on lightweight hangers (Kerfoot et al.,

2003). Similarly, presentation density whether garments are hung close together or spaced apart signals different brand messages: abundance and choice versus exclusivity and refinement.

2.2. Consumer Decision-Making and purchase Intention in Fashion

Consumer behavior refers to the decisions and actions of individuals or groups when purchasing, using, and disposing of products and services (Moutinho, 2000). It is a complex process influenced by numerous internal and external factors (Kotler & Armstrong, 2018). Essentially, consumer behavior is about understanding why people make certain purchasing decisions, what needs they want to satisfy, and how they process information (Mothersbaugh & Hawkins, 2016).

This study focuses on the critical endpoint of this process: purchase intention, which refers to the consumer's conscious plan or willingness to buy a specific product or service (Younus et al., 2015). It represents a subjective psychological state in which consumers evaluate their preferences and decide whether they are likely to purchase a product (Zhang & Huang., 2024). As a core construct in consumer behavior research, purchase intention is the strongest predictor of actual buying behavior, bridging the gap between attitude and action (Ajzen, 1991).

In the fast fashion industry, purchase intention reflects the degree of motivation and desire consumers experience when encountering trendy, affordable, and immediately available products. These intentions are primarily driven by hedonic motives, such as enjoyment, self-expression, and social approval (Byun & Sternquist, 2011). Within the luxury fashion sector, purchase intentions are often shaped by symbolic value, exclusivity, and emotional attachment to the brand, highlighting status and self-identity (Mulia & Asyifa, 2024).

Therefore, this study utilizes purchase intention as the dependent variable to assess the direct impact of product presentation. Effective visual design and in-store presentation can stimulate consumers' curiosity and help convert potential interest into actual purchases (Turley & Milliman, 2000).

2.2.1 Stimulus–Organism–Response (S-O-R) Model

Several models exist to explain consumer decision-making and behavior, this study focuses on the Stimulus-Organism-Response (S-O-R) framework, introduced by Mehrabian & Russell (1974). The model has been widely applied in marketing and consumer research to explain how

external environmental stimuli influence consumers' internal states and consequently, their behavioral responses (Zhang & Huang, 2024).

The S–O–R framework consists of three core components:

Stimulus (S): external factors in the environment that trigger consumer reactions. The stimuli are the different product presentation formats (flat lay, on-hanger, and mannequin) that consumers encounter in the physical retail environment.

Organism (O): refers to the internal processes within the consumer that are activated by the stimulus. In this research, organism variables include aesthetic appeal and perceived quality all internal states that process and evaluate the different presentation formats.

Response (R): represents the observable consumer reactions or behavioral intentions resulting from the stimulus-organism interaction. In the context of this study, the response variable includes purchase intention, reflecting the consumer's internal processing of the product presentation stimuli.

In addition to the core S–O–R components, this study includes the demographic variables gender and age as moderators. These factors are incorporated to capture potential differences in how consumers perceive and interpret the various product presentation formats (Stimulus). Moreover, the type of retail context between luxury and fast-fashion environments is included as an additional moderator.

2.2.2. Theory of Planned Behavior

The Theory of Planned Behavior highlights the importance of attitudes, social norms, personality, and perceived behavioral control in shaping individuals' intentions and subsequent actions (Ajzen, 1985). According to Ajzen (1991), intentions can be understood as the extent to which individuals are willing to exert effort to perform a behavior. Behavioral intention is at the center of the TPB theory and is the main predictor of purchase behavior (Ajzen, 1991).

Behavioral intention is shaped by three main antecedents (Armitage & Conner, 2001):

(1) Attitude toward the behavior: Reflecting the consumer's positive or negative evaluation of performing the purchase. While this study does not measure behavioral attitudes directly,

product-related evaluations such as aesthetic appeal and perceived quality can be understood as informing such attitudes.

(2) Subjective norms: referring to perceived social pressure from others to perform or avoid the behavior.

(3) Perceived behavioral control: which captures how easy or difficult the act of purchasing appears.

TPB provides essential theoretical support for understanding purchase intention as a valid and reliable outcome variable. In the context of this research, TPB offers theoretical foundation for the Response component of the S-O-R model. Rather than testing the complete TPB model, this study draws on TPB's core premise that behavioral intention serves as a meaningful predictor of actual consumer behavior (Ajzen, 1991), thus justifying purchase intention as the key dependent variable. Given these theoretical insights and previous empirical findings on how visual product cues shape consumers' evaluations, it is reasonable to expect that different in-store product presentation formats will influence consumers' purchase intentions.

H1: *The type of in-store product presentation significantly influences consumers' purchase intention, such that on-hanger and mannequin presentations lead to higher purchase intentions than flat-lay presentations.*

2.2.3. Aesthetic Appeal

Aesthetic appeal refers to the perceptual and affective evaluation of beauty, harmony, and order in visual stimuli (Toufani et al., 2017). In consumer contexts, it represents a sensory reaction to product or display features such as color, shape, texture, balance, and overall design coherence (Li & Li, 2022). According to Fechner's (1876) experimental psychology and Baumgarten's (1758) philosophy of sensory knowledge, aesthetic evaluation involves cognitive fluency and emotional arousal. This immediate emotional judgment shapes how consumers perceive product quality, value, and their intention to purchase (Hagtvedt & Patrick, 2014). In fashion retail, product presentation acts as an aesthetic stimulus, where arrangements like flat lay, on-hanger or mannequin evoke varying degrees of visual harmony and sensory pleasure. These affective reactions constitute the organismic response (O), shaping consumers' emotional engagement and influencing their purchase intention (R) (Mehrabian & Russell, 1974).

Visually coherent and balanced presentations characterized by simplicity and clarity enhance perceived aesthetics, generating positive emotions and stronger purchase intentions. The principle of simplicity plays a central role in aesthetic experience (Wang & Hsu, 2019). According to Gestalt psychology people naturally perceive visual stimuli as organized, coherent wholes rather than fragmented elements (Wertheimer, 1922). In fashion displays, clear visual order, matching color palettes, and realistic embodiment yield stronger aesthetic responses than flat or fragmented presentations (Wu et al., 2013). Products with higher design aesthetics evoke stronger positive emotions, increase trust, and reduce perceived risk (Shi et al., 2021). Research in live-streaming and online retail contexts confirms that rich visual presentations through lighting, motion, or tactile cues enhance aesthetic enjoyment, raising perceived product value and intention to purchase (Zhang, 2023). This Link is especially strong in fashion retail, where aesthetics is integral to self-expression and identity (Koksal et al., 2025). Hwang & Kandampully (2012) demonstrate that aesthetic appeal enhances satisfaction and loyalty by creating enduring emotional attachment. Taken together, the literature establishes aesthetic appeal as a central mediator between product presentation and purchase intention. Presentations that enhance visual harmony, clarity, and sensory richness are therefore expected to increase aesthetic appeal, ultimately raising consumers' willingness to buy.

H2a: *Aesthetic appeal mediates the relationship between product presentation format and purchase intention, such that presentations like mannequin and on-hanger generate higher aesthetic appeal than flat-lay presentations.*

2.2.4. Perceived Quality

Perceived quality refers to the consumer's judgment regarding a product's overall excellence or superiority relative to alternative options, and is different from objective quality, which concerns the technical measures of quality (Zeithaml, 1988). It represents consumers beliefs about a product's dependability and craftsmanship, based on cues available prior to purchase (Mittal, 2004). Perceived customer value and extrinsic cues are mediated by perceived product quality (Dodds et al., 1991). According to Yu et al. (2012), perceived quality acts as a cognitive shortcut that reduces risk and promotes confident decision-making in fashion contexts where product evaluation is tactile and visual.

While the aesthetic dimension is based on emotional reactions to how something looks, perceived quality depends on how people judge a product's trustworthiness, durability,

flawlessness, and reliability (Baghirov & Zhang, 2024). The way a product is presented also signals its quality. When displays are neat and organized, consumers see this attention to detail as a sign of high quality (Javeed et al., 2022).

Comparable evidence indicates that visual design increases purchase intention through perceived quality, as aesthetic presentation cues shape quality judgments, which subsequently drive intention (Khan et al., 2025). Although static displays create positive perception, a dynamic display is more effective for experienced-based products like fashion apparel (Kim & Forsythe, 2008). Presentation formats that provide both an overall view and product details lead to a significantly higher perceived quality (Park et al., 2005). Furthermore, visual merchandising elements, including coordinated racks or mannequins, demonstrate attention to detail and a commitment to presentation, prompting consumers to infer higher garment quality (Law et al., 2012).

Although these insights stem largely from studies in digital environments, they prompt us to ask if the same mechanisms apply in physical stores. How products are displayed can affect consumers' cognitive processing and mental imagery, which subsequently enhance perceived quality and shape purchase intention (Wu et al., 2020). This may be true for in-store displays like mannequins, flat lays or items on hangers, since each style gives shoppers different information and emotional cues (Cheng et al., 2022).

Perceived quality is a strong predictor of purchase intention and satisfaction. It acts directly and indirectly via perceived value and trust, suggesting that quality judgments function as instrumental and emotionally driven precursors of consumer choice (Tsiotsou, 2006; Saleem et al., 2015), highlighting its importance as a key evaluation that marketers can shape through display choices (Mirabi et al. 2015). Perceived quality also builds brand reliability and loyalty by giving consumers a clear reason to choose one brand over another, shaping immediate buying decisions and long-term brand commitment (Mathur & Gangwani, 2021; Frank et al., 2014). Based on this reasoning, the following hypothesis is proposed:

H2b: *Perceived quality mediates the relationship between product presentation format and purchase intention, such that presentations like mannequin and on-hanger generate higher perceived quality than flat-lay presentations.*

2.3. Moderating Variables in Fashion Consumption

2.3.1. Brand Type: Luxury vs. Fast Fashion

The fashion industry is characterized by a wide spectrum of brand positioning, ranging from exclusive luxury labels to mass-market fast fashion (Joy et al., 2012). This difference not only shapes how the market operates but also determines how consumers interpret product presentation (Hines & Bruce, 2007). The luxury market is defined by the communication of rarity, exclusivity, craftsmanship, and superior quality (Vock, 2022). Product presentation plays a crucial role in showcasing these attributes (Leung et al., 2020). Luxury retail environments are designed to communicate exclusivity through architectural staging, lighting, and minimalist arrangements where individual items are isolated like artworks (Logkizidou et al., 2019). The visual presentation delivers high functional values (durability & quality), experiential values and symbolic values (Kapferer et al., 2017).

Mannequin or on-body displays are often placed in flagship windows or museum-like environments, where fashion meets art (Dion & Arnould, 2011). Garments presented vertically on hangers make the full silhouette and fabric behavior more visible than folded displays, allowing consumers to better evaluate drape, length and construction details (Pegler, 2012; Morgan, 2015). This format strengthens perceptions of authenticity and artisanal credibility while maintaining the gallery-like atmosphere typical of high-end retail (Dion & Arnould, 2011; Vukadin et al, 2016). Carefully curated presentations of luxury products characterized by limited numbers and a focus on craftsmanship foster exclusivity and aesthetic appreciation (Kapferer, 2012).

In contrast, the fast fashion segment is characterized by rapid trend cycles, high product availability, and price sensitivity (Joy et al., 2012; Akhilendra & Aravendan, 2023). Here, product presentation primarily communicates speed, clarity, and immediate value-for-money (Cook & Yurchisin; Pantano, 2019). Aesthetic appeal lies in the constant “refreshment” of the assortment and the ability to imitate high fashion to satisfy consumers’ desire for instant gratification (Bhardwaj & Fairhurst, 2010; Zhang & Huang, 2024).

On-hanger presentations dominate in fast fashion stores, as they efficiently display a wide product assortment in minimal space (Gabrielli et al., 2012). They communicate availability, variety, and immediacy, allowing customers to browse quickly and make spontaneous purchase

decisions (Bhardwaj & Fairhurst, 2010). Grouping items by theme or color palette further enhances navigability (Zentes et al., 2016). Flat-lay displays create a visually organized product environment that simplifies choices and help frame decision-making (Lamberton & Diehl, 2013). Clean, harmoniously arranged flat lays compensate for lower intrinsic quality by creating visual satisfaction and accessibility. User-generated flat lays on social media reinforce authenticity (Manovich, 2017), while in-store, stacks of folded garments maximize space efficiency. Mannequin displays in fast fashion serve a different purpose from luxury, they are employed primarily for high-turnover trend communication, with frequent styling changes to signal constant newness and stimulate repeat visits (Akhilendra & Aravendan, 2023).

Overall, the functionality of product presentation adapts to each brand type's strategic objectives. In luxury, presentation formats serve as cultural and aesthetic expressions that reinforce craftsmanship, scarcity, and prestige, turning the act of display into an extension of the brand's identity (Dion & Arnould, 2011). In fast fashion, presentation formats operate as tools of efficiency and clarity, supporting rapid decision-making and immediate gratification. Presentation thus becomes a strategic instrument adapted to each brand's value system artful storytelling for luxury and accessibility-driven communication for fast fashion.

Therefore, brand type is expected to shape the strength and direction of the effect of product presentation on purchase intention. This leads to the following hypothesis:

H3: *Brand type moderates the relationship between product presentation on purchase intention, such that on-hanger and mannequin generate stronger effects for luxury brands than for fast fashion.*

2.3.2. Age and Gender Differences in Perception of Product presentation

Men and women consistently demonstrate distinct responses to visual merchandising in fashion retail, reflecting fundamental differences in cognitive processing, emotional triggers, and shopping motivations (Dinesha, 2022). Women are generally more influenced by rich visual context and emotional imagery in product displays, engaging in imaginative self-projection, detailed elaboration on styling cues and presentation formats (Meyers-Levy & Sternthal 1991). When products are presented within a rich contextual background such as styled environments, lifestyle scenarios, or coordinated outfits women's perceptions of emotional value and purchase intentions increase significantly (González et al., 2021). They tend to engage in imaginative

self-projection, visualizing how items could fit into their lives or personal style. According to Meyers-Levy & Sternthal (1991) women are more comprehensive information processors, engaging in more detailed and elaborative assessments of available visual and contextual cues. Meaning, women respond more strongly to presentations rich in sensory details, emotional narratives, and opportunities for imagined product use, which leads to heightened hedonic value, self-expression, and stronger purchase intention (Lin et al, 2019; Meyers levy and Maheswaran 1991).

On the other hand, men generally value functional, informational and status-related features more when shopping for fashion (Bakewell & Mitchell, 2004). Male shoppers tend to employ more selective, heuristic-based processing, focusing on direct cues of quality, exclusivity, and social signaling (Lin et al., 2019). Men typically approach shopping as a time-bound activity, exhibiting less patience for browsing and aiming for rapid completion (Otnes & McGarth, 2001). In the luxury segment, men show greater sensitivity to themes of elitism, scarcity, and brand authority, while in fast fashion, a minimalist and direct presentation may support their preference for efficiency and task-driven purchase decisions (Tafani et al., 2024; Torres et al., 2001). Relative to women, men are less positively influenced by contextual or richly styled displays, sometimes perceiving them as distracting or unnecessary (Underhill, 2009). This suggests that men may respond more favorably to presentation formats that provide clear, embodied reference points with minimal contextual complexity.

Age also intersects with gender in shaping responses to product presentation. Enock & Srinivasan (2025) showed that younger consumers are more susceptible to in-store visual cues, with approximately 60% of shoppers aged 18-25 reporting strong influence from visual merchandising, this trend decreases slightly with age, but even in the 45-55 age group, 45% reported being influenced by visual merchandising. This suggests that while visual displays matter across all ages, their impact on purchase intention is heightened among younger.

Research also highlights that perceived similarity with models enhances identification and purchase intention among mid-life and older consumers (Kozar, 2012). This effect can be conceptually extended to in-store mannequins, which similarly act as visual representations of the self. When mannequins reflect realistic body proportions, they may foster greater identification and comfort, thereby increasing purchase likelihood (Shealy, 2016). According to Yoon (1997), age also influences consumers' information-processing strategies: younger adults tend to engage in detailed, analytical evaluation, whereas older adults rely more on

schema-based or gist processing. However, when older consumers are provided with vivid visual or imagery cues that facilitate mental simulation, their ability to process detail improves (Carpenter & Yoon, 2012).

From a generational perspective, Millennials and Generation Z exhibit heightened responsiveness to trend-oriented visual merchandising. Vuong & Nguyen (2018) demonstrated that Millennials' purchase intention towards fast-fashion is driven by fashion consciousness a proxy for trend-sensitivity, while Chen (2021) showed that brand awareness and perceived fissionability significantly influence purchase intention among Gen Y/Z fast-fashion consumers. These younger cohorts are attuned to cues of immediacy, trendiness, and social proof such as influencer-linked displays and rapid collection refreshes that communicate a sense of "buy-now-or-miss-out" urgency (You, 2025; Djafarova & Bowes, 2021). Conversely, applying insights from Cole et al. (2009) and Peng et al. (2016), show that older adults prefer environments that are emotionally meaningful, structured, and cognitively accessible. They prefer orderly, well-lit, and visually coherent displays, while younger shoppers are drawn to dynamic and visually stimulating configurations (Puccinelli, et al., 2009). Although few studies directly compare specific display formats across age segments, existing evidence suggests that demographic factors influence the effectiveness of visual merchandising in fashion retail. Taken together, these findings suggest that age-related differences in information processing and visual sensitivity may condition how consumers respond to different product presentation formats. This leads to the following hypothesis:

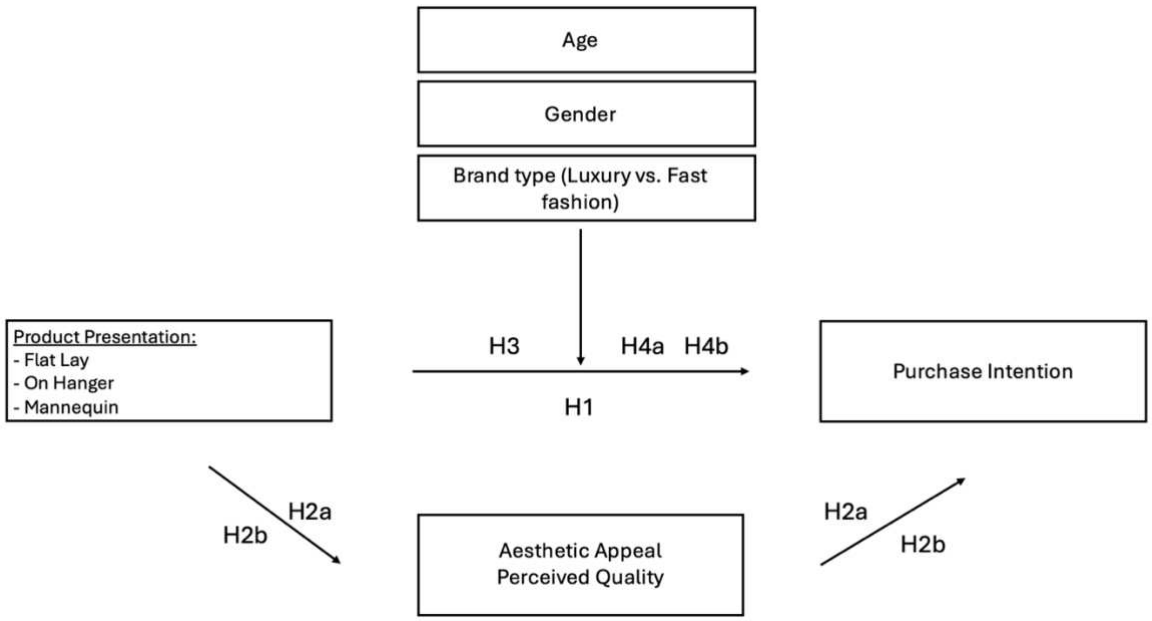
H4a: *Gender moderates the effect of in-store product presentation on purchase intention, such that men and women respond differently to the various presentation formats.*

H4b: *Age moderates the effect of in-store product presentation on purchase intention, such that younger and older consumers differ in how they evaluate presentation formats.*

2.4 Conceptual Model

Figure 1 illustrates the model based on the proposed hypotheses. It serves as the basis for the following data analysis.

Figure 1: *Conceptual Model*



3. Methodology

3.1 Research Design

The aim of this study was to examine how different in-store product presentation formats: flat lay, on-hanger, and mannequin displays influence consumers' aesthetic perception, perceived quality, and purchase intention. Furthermore, the study investigated whether these effects differ across brand types (luxury vs. fast fashion) and whether demographic characteristics moderate the observed relationships.

To address these research objectives a quantitative, 3 × 2 between-subjects experimental design was employed, combining three levels of product presentation format with two levels of brand type. Quantitative methods are particularly suitable for examining causal relationships and statistically testing theoretically grounded hypotheses (Creswell & Creswell, 2017), making an experimental design well-suited for isolating the effects of controlled visual manipulations. Online experiments are widely used in consumer behavior and retail research, as they allow full control over stimulus exposure, automated random assignment to experimental conditions, and consistent environmental conditions across all respondents (Kohavi et al., 2009).

Data were collected through an online survey created using Qualtrics, a well-established survey platform (Carpenter et al., 2019). In line with best practices in consumer behavior and retail research, the quantitative design was complemented by qualitative components to ensure conceptual clarity and measurement validity (Krueger & Casey, 2009). Before the main data collection, a two-stage pretest procedure was conducted. First, two focus groups of 6 to 8 participants were used to refine the conceptual definitions, explore consumer interpretations of presentation formats, and ensure that the visual stimuli realistically reflected typical in-store environments. Second, a quantitative pilot test (N = 52) evaluated scale clarity, internal consistency, and stimulus recognizability. Feedback from both stages were used to refine the survey before launching.

3.3. Procedure

3.3.1 Stimuli Development

The hypotheses were tested using a 3 (presentation style: flat lay vs. on-hanger vs. mannequin) × 2 (brand type: luxury vs. fast fashion) between-subjects experimental design, resulting in six experimental conditions. To ensure consistency across conditions, six visual stimuli were created, all depicting the same product category, outfit composition, and color palette. Each presentation format flat lay, on-hanger, and mannequin were produced in both a male and female version to avoid gender bias. Because luxury and fast-fashion brands differ substantially in their in-store atmospheres, it was not possible to use identical backgrounds across all stimuli. Instead, the visual contexts were adapted to signal the intended brand type through subtle cues such as lighting, material textures, and overall store ambience, while all non-essential elements were standardized as much as possible. The finalized stimuli were embedded in the Qualtrics questionnaire, where respondents were randomly assigned to one condition. The detailed specification of all experimental conditions is provided in Appendix 1.1 to ensure full replicability.

3.3.2 Pretest

A two-stage pretest was conducted to refine the questionnaire and ensure clarity, reliability and suitability of the measurement items and the visual stimuli. First, two focus groups, each

consisting of 6–8 participants were conducted. The discussions followed a semi-structured guide, the key insights are summarized in Appendix 1.2.

Following the focus groups, a quantitative pretest was conducted with (N = 52) participants, who evaluated the original 7-item scales for Aesthetic Appeal, Perceived Quality and Purchase Intention. The aesthetic appeal scale demonstrated acceptable internal consistency (Cronbach's $\alpha = .70$). Inspection of the item–total statistics indicated that one item ("The overall in-store presentation looks stylish and well-presented") showed a very low corrected item–total correlation ($r = .06$) and negatively affected scale reliability. In addition, one borderline item ("The in-store presentation appears organized and orderly") was removed to ensure a more parsimonious and conceptually homogeneous measurement. The initial 7-item perceived quality scale showed insufficient internal consistency (Cronbach's $\alpha = .61$). Item–total statistics revealed that items 4 and 5 exhibited very low or negative corrected item–total correlations, indicating a poor conceptual fit with the construct. After removing these items, the internal consistency of the scale improved Cronbach's alpha ($\alpha \geq .70$). Similarly, the initial purchase intention scale demonstrated low internal consistency (Cronbach's $\alpha = .57$). Two items ("makes me feel confident in purchasing" and "increases my desire to purchase it over similar alternatives") displayed particularly low corrected item–total correlations and were therefor excluded. Detailed reliability statistics and item analyses are reported in Appendix 1.3.

3.3.3 Survey

Upon accessing the online survey, participants were first presented with an introduction explaining the purpose of the study and the assurance of anonymity in their responses. By proceeding, participants consented to take part in the study.

Participants were randomly assigned to one of the six experimental conditions representing a specific combination of presentation format (flat lay, on-hanger, mannequin) and brand type (luxury vs. fast fashion). They were instructed to imagine encountering the displayed product while browsing in a clothing store. Each participant viewed a single visual stimulus corresponding to their assigned condition. Immediately following the exposure, participants answered the manipulation-check question to verify whether they correctly perceived the brand type. Participants were asked to classify the brand shown in the stimulus as "Luxury," "Fast Fashion," or "Other." This ensured that the intended manipulation brand type signaled through visual cues was successfully recognized.

Following the manipulation check, participants completed the measurement items assessing aesthetic appeal, perceived quality and purchase intention. These constructs were measured with the refined four/five-item scales developed and validated in the pretest, each using a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree, ensuring that evaluations directly reflected the presented stimulus. To minimize response patterns and order effects, the items within each scale were presented in randomized order. Once participants completed the evaluation items, an attention-check question was presented to ensure data quality. This item required respondents to select a specific number ("4") on a 7-point Likert scale (e.g., "To make sure you are paying attention, please select the number 4 on the scale below") (Waites & Ponder, 2016). Participants who failed this check were excluded from the analytical dataset. The final section gathered demographic information, such as age, gender, nationality, education level and purchase frequency.

Additionally, all survey questions were presented using a forced-response format, meaning that participants could not proceed without providing an answer. The survey ended with an optional feedback section and a debriefing, where participants were thanked for their participation. For further details, refer to Appendix 2.

3.4 Variable Measurement

3.4.1 Independent Variable: Product Presentation

Product presentation format served as the independent variable in this study and was operationalized through the experimentally manipulated visual stimuli described earlier. The variable comprised three levels flat lay, on-hanger, and mannequin. These formats were selected based on existing retail literature (Xia et al., 2020; Farrell-Beck et al., 2000) and refined through qualitative and quantitative pretesting to ensure recognizability, realism, and ecological validity. Because the manipulation was embedded directly in the stimulus, participants did not evaluate the independent variable itself. Instead, each participant was randomly exposed to one of the six presentation formats, ensuring that observed differences in aesthetic appeal, perceived quality, or purchase intention could be linked to the experimental manipulation.

3.4.2 Mediators: Aesthetic Appeal & Perceived Quality

Aesthetic Appeal was measured using a five-item scale adapted from prior research on visual aesthetics and product display evaluations. The items capture perceptions of visual harmony, attractiveness, balance, cleanliness, and, consistent with identified aesthetic constructs (Hagtvedt & Patrick, 2014). Participants were asked to indicate the extent to which they agreed with statements describing the in-store product presentation (e.g., "The in-store product presentation looks aesthetically pleasing"), using a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. These items represent established dimensions of aesthetic evaluation, which influence emotional reactions and downstream purchase-related judgments (Wertheimer, 1922; Wang & Hsu, 2019).

Perceived Quality was measured using a five-item scale adapted from well-established measures of perceived quality and craftsmanship (Khan et al., 2025). These items reflect consumers' cognitive evaluations of product excellence, precision, durability, and the perceived attention to detail communicated through the in-store presentation (Javeed et al., 2022). Participants evaluated their agreement with statements such as "The way the product is presented in-store appears to be of high quality," using a 7-point Likert scale. The items align with core dimensions of perceived quality highlighted in the literature flawlessness, durability, craftsmanship, and professional execution (Baghirov & Zhang, 2024; Aakko & Niinimäki, 2021) and correspond to Garvin's (1987) foundational quality dimensions.

3.4.3 Moderator: Brandtype, age and gender

Brandy Type (luxury vs. fast fashion) was implemented as a manipulated categorical moderator within the experimental stimuli. Participants were exposed to only one brand context through the visual display. The classification into luxury or fast-fashion conditions was therefore controlled experimentally.

Gender was collected at the end of the survey using a self-report multiple-choice item in which participants selected one of four categories: Male, Female, Non-binary/third gender, or prefer not to say. Gender was included as a moderator because extensive research shows that men and women differ in their visual attention, information-processing styles, and emotional engagement with fashion-related cues (Dinesha, 2022). Women typically engage in more holistic and elaborative processing of visual merchandising stimuli, whereas men rely more on

heuristic, functional, and efficiency-driven evaluations (Meyers-Levy & Maheswaran 1991; Bakewell & Mitchell, 2004)

Age was included as a continuous moderator to investigate whether younger and older consumers differ in their responses to the presentation formats. Previous research shows that younger adults tend to be more sensitive to visual merchandising cues, novelty, and trend stimulation, whereas older adults place greater value on structure, clarity, and cognitive accessibility in product displays (Yoon, 1997). Younger consumers typically engage in detailed, analytical processing, while older adults rely more on gist-based or schema-driven evaluations unless vivid imagery is provided (Carpenter & Yoon, 2012). Age was measured through an age-range question with five response categories (18–24, 25–34, 35–44, 45–54, 55+).

3.4.4 Dependent Variable: Purchase Intention

The dependent variable, purchase intention, measured participants' likelihood of buying the product shown in the stimulus. As one of the strongest predictors of actual buying behavior, it represents the Response (R) component within the S–O–R framework applied in this study (Zhang & Huang, 2024). Participants evaluated their purchase intention using five items adapted from validated scales widely used in marketing and retail contexts (Spears & Singh, 2004). The items assessed whether the in-store product presentation increased consumers' willingness to buy and their likelihood of choosing the product. All responses were recorded on a 7-point Likert scale. These items were chosen because they validly represent intention strength by capturing cognitive evaluations of the product and motivational readiness to engage in the purchasing behavior. According to the Theory of Planned Behavior, behavioral intention reflects the individual's motivational preparedness to perform a behavior and is shaped by cognitive appraisals that precede action (Ajzen, 1991). Therefore, the scale directly aligns with the TPB definition of intention and offers a theoretically grounded operationalization of purchase intention.

4. Results and Discussion

4.1 Sample Characteristics

To achieve a broad and diverse sample, participants were recruited using convenience sampling through social media platforms, including Instagram, WhatsApp, and Facebook. Participation in the survey was voluntary and anonymous. The survey was available between November 20, 2025 and December 12, 2025 gathered 347 responses. From these, 24 participants were excluded because they did not pass the attention or manipulation check, resulting in a final valid sample of 323 participants. The sample consisted of 59.1% male, 39.3% female, 1.2% non-binary/third gender, and 0.3% who preferred not to disclose their gender. Participants were primarily between 25–34 years old (48.9%, n = 158), followed by 18–24 (20.7%, n = 67), 35–44 (17.3%, n = 56), 45–54 (10.2%, n = 33), and 55+ (2.8%, n = 9). Most respondents identified as German (65.9%, n = 213), Portuguese (10.5%, n = 34), Italian (11.5%, n = 37), Spanish (5.3%, n = 17), or French (3.4%, n = 11), while additional nationalities were reported through open entries. Regarding education, 41.8% held a high school qualification or equivalent, 22.9% had completed college or university, 20.4% held a bachelor's degree, 10.2% held a master's degree, and 2.8% held a doctoral degree or higher. Fashion purchasing frequency varied, with 32.2% buying items less than once per month, 29.4% once a month, 24.5% two to three times per month, 9.0% once a week, and 5.0% several times per week. For more details on the population statistics, see Appendix 3.

4.2 Hypothesis Testing

To test H1, a univariate ANCOVA was conducted, with purchase intention (PI) as the dependent variable and product presentation type as the independent factor. Age and gender were included as control variables. This Approach allows isolating the unique contribution of presentation type while holding demographic influences constant. The overall model was statistically significant ($p < .001$), indicating that product presentation type has a meaningful impact on purchase intention. Presentation type emerged as a strong predictor ($p < .001$). The control variables did not exert a meaningful influence on purchase intention, as neither age ($p = .707$) nor gender ($p = .446$) showed statistical significance. This implies that demographic characteristics did not confound the relationship between presentation format and purchase intention, strengthening the internal validity of the observed effect. Estimated marginal means

clarified that hanger presentations produced the highest purchase intention (M = 5.42, SE = 0.14), followed by mannequin displays (M = 5.26, SE = 0.14). In contrast, flat-lay presentations generated substantially lower scores (M = 3.48, SE = 0.14). Pairwise comparisons using Bonferroni corrections confirmed that both hanger and mannequin formats significantly outperformed flat- lay (hanger vs. flat: $p < .001$; mannequin vs. flat: $p < .001$). The difference between hanger and mannequin was not significant ($p = 1.000$). Taken together, these results provide strong support for H1. In-store product presentations that display clothing on a hanger or mannequin elicit substantially higher purchase intentions compared to flat-lay arrangements (see Appendix 4.1)

A mediation analysis was conducted using the Hayes PROCESS macro (Model 4) to test H2a and H2b (see Figure 2). The presentation types were dummy-coded with flat-lay as the reference category (1 = flat, 2 = hanger, 3 = mannequin). First, the analysis examined whether presentation type predicts aesthetic appeal (Path a). The model was statistically significant ($p < .001$), indicating that presentation type accounts for a substantial proportion of variance in perceived aesthetic appeal. Compared to the flat-lay display (reference group), both hanger and mannequin presentations generated significantly higher levels of aesthetic appeal. The hanger display (X_1) produced a strong positive effect ($b = 1.9218$, $p < .001$), and the mannequin (X_2) presentation similarly increased aesthetic appeal ($b = 1.8509$, $p < .001$).

Secondly the effect of aesthetic appeal on purchase intention (Path b) was assessed. Aesthetic appeal significantly predicted purchase intention ($b = .8206$, $p < .001$), demonstrating that higher perceived aesthetic quality translates directly into stronger purchase motivations. The model further tested whether presentation type exerts a direct effect on purchase intention when controlling for aesthetic appeal (Path c'). Both presentation formats displayed small but statistically significant direct effects. The hanger format increased purchase intention relative to flat-lay ($b = .3624$, $p = .0043$), as did the mannequin format ($b = .2699$, $p = .0340$). This indicates that the positive influence of three-dimensional presentation formats on purchase intention cannot be fully explained by aesthetic appeal alone.

Finally, the indirect effects (Path a*b) were evaluated using percentile bootstrap confidence intervals (5,000 samples). Both formats demonstrated significant mediation effects. The indirect effect of the hanger display ($b = 1.5770$) and the indirect effect of the mannequin display ($b = 1.5188$). The confidence intervals for both effects do not include zero, the results provide robust evidence that the enhancement in purchase intention generated by three-

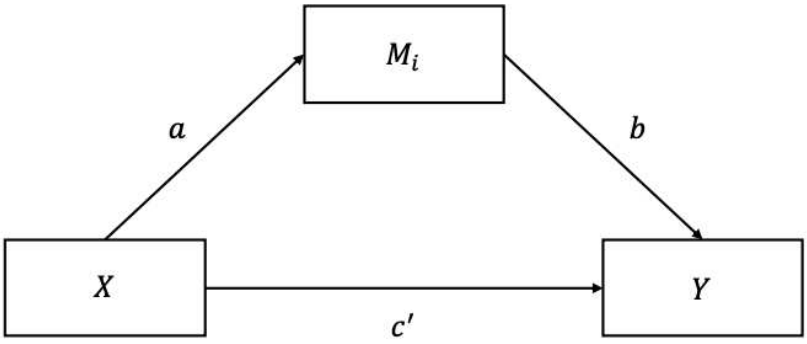
dimensional displays is largely transmitted through elevated perceptions of aesthetic appeal. In sum the mediation analysis provides strong support for H2a. Both hanger and mannequin presentations significantly increase aesthetic appeal relative to flat-lay formats, and this in turn substantially boosts purchase intention (see Appendix 4.2).

Following the analysis on aesthetic appeal, a second mediation model was conducted to examine whether perceived quality explains the relationship between product presentation format and purchase intention. Firstly, the analysis evaluated whether presentation format predicts perceived quality. The model was statistically significant ($p < .001$), indicating that differences in product presentation account for 29% of the variance in perceived product quality. Relative to the flat-lay, both three-dimensional formats generated significantly higher perceived quality. The hanger condition showed a strong positive effect ($b = 1.9146$, $p < .001$), as did the mannequin format ($b = 1.8160$, $p < .001$).

Afterwards perceived quality was examined as a predictor of purchase intention. The results demonstrated a strong and statistically significant relationship ($b = .8712$, $p < .001$), indicating that higher levels of perceived quality are associated with increased willingness to purchase. Next, the model assessed whether presentation type influences purchase intention when perceived quality is held constant. Controlling for perceived quality, the hanger condition remained positively associated with purchase intention ($b = .2715$, $p = .026$). In contrast, the mannequin format did not show a statistically significant direct effect ($b = .2067$, $p = .090$), indicating that its effect on purchase intention is largely accounted for by perceived quality. Gender was included as a control variable in both mediation analysis (H2a & H2b) with the patterns remaining stable in each case, indicating that the effects were not driven by demographic differences.

Finally, the indirect mediation effects were examined using percentile bootstrap confidence intervals (5,000 samples). The hanger condition showed a significant indirect effect via perceived quality ($b = 1.6679$). A comparable significant mediation effect was observed for the mannequin condition ($b = 1.5820$), confirming that both presentation formats increase purchase intention through elevated quality perceptions. Taken together, the mediation analysis provides strong support for H2b (see Appendix 4.3).

Figure 2: *Conceptual Model 4 of Hayes Process macro for SPSS*



Note. Adapted from *PROCESS: A versatile computational tool for observed variable mediation, moderation and conditional process modeling*, by A. F. Hayes, 2012.

To examine whether the effect of product presentation format on purchase intention depends on brand type, a moderation analysis was conducted using Hayes' PROCESS macro (Model 1) (see Figure 3). As in the previous analyses, dummy coding was applied, using flat-lay as the reference category. The moderator was coded as 0 = luxury and 1 = fast fashion.

This model tests whether the association between presentation format and purchase intention varies depending on the brand context, as reflected in the interaction terms between presentation type and brand type. The model was statistically significant ($p < .001$), indicating that a substantial proportion of variance in purchase intention is explained by product presentation, brand type and their additive effects. Consistent with the previous analyses, both hanger and mannequin presentations elicited significantly higher purchase intentions than flat-lay displays. Brand type also exerted a significant main effect ($b = 1.5034$, $p < .001$) indicating that products associated with fast-fashion brands elicited substantially higher purchase intentions than those associated with luxury brands. Neither the interaction between hanger presentation and brand type (Int_1: $b = –.0062$, $p = .985$) nor the interaction between mannequin presentation and brand type (Int_2: $b = –.1348$, $p = .692$) reached statistical significance. The omnibus test of conditional interactions similarly indicated that brand type does not alter the relationship between presentation format and purchase intention ($p = .904$). The findings do not support H3 (see Appendix 4.4).

To test H4a, gender was included as a moderator in the relationship between product presentation format and purchase intention using Hayes' PROCESS macro (Model 1).

Presentation format was dummy-coded with flat-lay as the reference category, allowing comparisons of hanger (X_1) and mannequin (X_2) displays relative to the baseline condition. Gender was coded as 0 = female and 1 = male. The model estimated the interaction terms between each presentation format and gender (X_1×Gender; X_2×Gender) to assess whether men and women respond differently to the various in-store display formats. The overall model was statistically significant ($p < .001$), indicating that the predictors included in the model explain variance in purchase intention. Both presentation formats exerted significant positive effects on purchase intention among female participants (gender = 0). Compared to the flat-lay baseline, the hanger presentation increased purchase intention ($b = 1.7135$, $p < .001$), and the mannequin format also yielded a significant positive effect ($b = .7577$, $p = .020$). Gender was a significant predictor of purchase intention, such that male participants reported lower purchase intentions than female participants ($b = –.7240$, $p = .0084$).

Crucially for H4a, only one of the interaction terms was significant. The hanger-by-gender interaction was not significance ($b = 0.5034$, $p = .1894$), whereas the mannequin-by-gender interaction showed a strong and statistically reliable effect ($b = 1.6735$, $p < .001$). Among female respondents, both three-dimensional displays outperformed flat-lay. The hanger display generated stronger purchase intentions ($b = 1.7135$, $p < .001$), and the mannequin display also produced a significant positive effect ($b = .7577$, $p = .020$). Among male respondents, the effects were even stronger: hanger displays produced a large increase in purchase intention ($b = 2.2169$, $p < .001$), while mannequin presentations showed an even larger positive effect ($b = 2.4312$, $p < .001$).

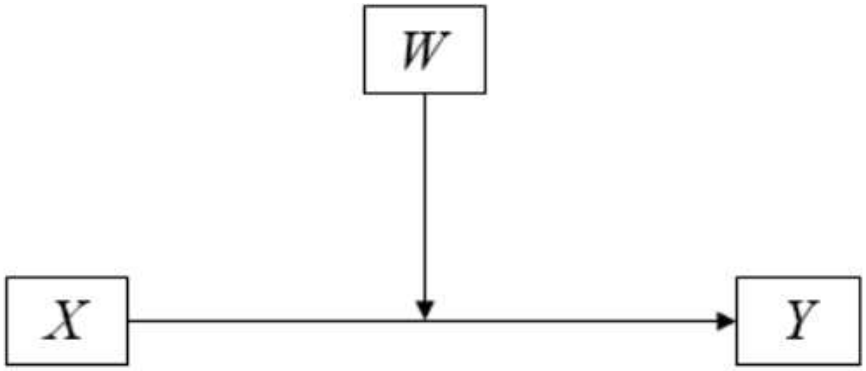
Overall, the moderation analysis partially supports H4a. Gender moderates the relationship between presentation format and purchase intention, but only for the mannequin condition. While both genders respond positively to hanger and mannequin displays, men exhibit markedly stronger purchase intentions in response to mannequin presentations. See Appendix 4.5 for further details.

Following the examination of gender, a second moderation model tested whether age alters the impact of presentation format on purchase intention. Age was entered as the moderator (W), with younger participants coded as 0 and older participants coded as 1. This specification allows the model to examine whether the predictive effects of hanger and mannequin presentations relative to flat-lay differ systematically across age cohorts. The overall model was statistically significant ($p < .001$), indicating that product presentation format and age account for a

meaningful proportion of variance in purchase intention. Consistent with prior analyses, both hanger and mannequin formats generated significantly higher purchase intention scores relative to the flat-lay reference group.

Age itself did not significantly predict purchase intention (b = –.3937, p = .200), suggesting that younger and older participants expressed comparable baseline levels of purchase interest. Most importantly, the interaction terms assessing moderation were non-significant. The interaction between hanger presentation and age (Int_1: b = .6974, p = .103) did not reach statistical significance, nor did the interaction between mannequin presentation and age (Int_2: b = .6569, p = .125). The omnibus test of the highest-order interaction confirmed the absence of moderation (p = .191). Taken together, these results do not provide support for H4b. Age does not appear to alter how individuals evaluate in-store product presentation styles such as flat-lay, hanger or mannequin displays. Further details can be found in Appendix 4.6.

Figure 3: Conceptual Model 1 of Hayes Process macro for SPSS



Note. Adapted from *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling*, by A. F. Hayes, 2012.

4.3 Interpretation of Key Results

The findings for H1 confirm the central role of product presentation format as a powerful visual merchandising cue in fashion retail. The ANCOVA results show that, even after controlling for age and gender, the type of in-store presentation explains variance in purchase intention. Hanger and mannequin display elicit higher purchase intentions than flat-lay formats. This pattern aligns with the S-O-R framework, in which visual stimuli in the retail environment (S) trigger internal evaluations (O) that ultimately shape behavioral responses (R) (Zhang & Huang, 2024).

Presentation format operates as a salient stimulus that directly influences consumers' willingness to buy, independent of demographic characteristics. The superiority of three-dimensional presentations over flat-lay displays is consistent with prior work showing that visually rich and embodied formats support mental simulation and self-projection into the consumption situation (Escalas, 2004; Zhao & Xia, 2021). Mannequins and on-hanger displays approximate how garments look on a body or hanging in a wardrobe, thereby lowering cognitive effort and making it easier for consumers to imagine fit, drape and styling options (Kim & Forsythe, 2008; Boardman & McCormick, 2019). In contrast, flat-lay presentations are more functional and information-oriented but provide less support for imaginative visualization which evoke weaker hedonic responses (Kim et al., 2009; Qu & Baek, 2024).

Building on these results, H2a provide additional clarification. Product presentation format strongly predicts aesthetic appeal, with both hanger and mannequin displays being evaluated as more attractive than flat-lay arrangements. In turn, aesthetic appeal exerts a strong positive effect on purchase intention, and the indirect paths from presentation format via aesthetic appeal are statistically robust for both hanger and mannequin conditions. These findings support prior conceptualizations of aesthetic appeal as a core hedonic mechanism in visually driven product categories such as fashion (Toufani et al., 2017; Hagtvedt & Patrick, 2014). Consistent with Gestalt principles and research on visual harmony, three-dimensional presentations provide more coherent, balanced and lifelike depictions, which increases perceptual fluency, evokes positive affect and strengthens the desire to own the product (Wang & Hsu, 2019; Wu et al., 2013). While enhanced aesthetic appeal is a central pathway through which three-dimensional displays increase purchase intention, it is not the only one. Additional mechanisms may include improved mental imagery of fit, reduced perceived risk, and stronger alignment with consumers' self-concepts and identity goals (Kim & Forsythe, 2008; Koksal et al., 2025).

The second mediation model (H2b) shows a similar pattern for perceived quality. Presentation format significantly predicts perceived quality, with hanger and mannequin displays again outperforming flat-lay arrangements. Perceived quality emerges as strong predictor of purchase intention, in line with existing research positioning quality judgments as central cognitive antecedents of value perceptions, satisfaction and buying decisions (Dodds et al., 1991; Tsiotsou, 2006; Saleem et al., 2015). The sizable and statistically significant indirect effects indicate that consumers infer higher reliability, durability and craftsmanship from three-dimensional presentations, which then translates into heightened willingness to purchase. These

findings echo visual merchandising studies showing that organized, coherent and carefully curated displays are interpreted as signals of superior product quality and brand professionalism (Law et al., 2012; Javeed et al., 2022). The direct effect for the mannequin format once perceived quality is included indicates that its influence on purchase intention operates mainly through quality evaluations. While mannequins facilitate mental simulation and visualization of fit and drape in general (Escalas, 2004; Kamleitner & Feuchtl, 2015), the present findings indicate that these perceptual benefits translate specifically into heightened quality judgments. By contrast, the hanger display maintains a positive direct effect even after accounting for perceived quality. This suggests that hanger presentations activate additional mechanisms beyond quality evaluations. Their practical and familiar character allowing easy inspection, tactile access, and everyday wardrobe associations reduces decision uncertainty and strengthens self-relevance (Rahman, 2012).

Overall, the evidence for H2a and H2b demonstrates that the impact of in-store product presentation on purchase intention is not purely superficial. Three-dimensional formats are effective because they systematically upgrade how consumers feel about the visual beauty of the display and how they think about the product's quality. This aligns with dual-route theories of aesthetic perception: the hedonic route emphasizes sensory pleasure and emotional stimulation from visual beauty, while the cognitive route involves interpretive processing of design features that signal quality and craftsmanship (Handy et al., 2010). Both routes contribute to positive affective responses that enhance product evaluations and strengthen purchase intentions (Chaouali & Souiden, 2023).

The next analysis examined whether the effectiveness of product presentation formats depends on brand context. Contrary to expectations derived from visual merchandising and luxury branding literature, no interaction emerged between brand type and presentation format. Although hanger and mannequin display significantly increased purchase intention relative to flat-lay, these effects were constant across both luxury and fast-fashion. Importantly, brand type exerted a significant main effect: products associated with fast-fashion brands elicited higher purchase intentions than those associated with luxury brands, possibly due to the higher proportion of younger participants, who may be more inclined to favor affordable options. However, the moderation test was non-significant. In other words, what "shows" the product seems to matter more than "who" sells it. These finding challenges theoretical assumptions that the visual richness of three-dimensional displays should resonate more strongly in luxury

environments, where presentation is a core symbolic tool (Leung et al., 2020; Kapferer, 2012). Luxury retail often uses mannequins or curated hanging displays as cultural artifacts communicating craftsmanship, heritage and scarcity (Dion & Arnould, 2011; Logkizidou et al., 2019). Yet the present results suggest consumers respond to three-dimensional presentations similarly regardless of brand context.

Two mechanisms may explain this deviation: Display format may operate as a universal perceptual cue, helping consumers visualize garment fit and style independently of brand positioning. Prior work shows that embodied presentations reduce cognitive load, increase mental simulation and facilitate imagined ownership (Kim & Forsythe, 2008; Escalas, 2004). These perceptual benefits may be strong enough to dominate contextual branding cues. Second, brand category may have been processed as background information, particularly in an experimental setting where participants evaluated isolated visual displays rather than immersive retail environments. Research in luxury retail emphasizes that exclusivity cues emerge from the holistic staging architecture, spacing, lighting and store affordances not merely from product presentation itself (Kapferer et al., 2017; Vukadin et al., 2016). The absence of spatial or sensory context may have weakened the moderating role of brand type.

Beyond the main and mediated effects, the moderation analyses provide insight into how demographic characteristics shape responses to product presentation formats. Although both hanger and mannequin display increased purchase intention relative to flat-lay, the mannequin format produced a significantly stronger effect among male participants. While prior research emphasizes women's stronger responsiveness to rich contextual and narrative displays (Meyers-Levy & Sternthal, 1991; González et al., 2021), the present findings indicate that mannequins activate a different evaluative mechanism for men.

Taken together, the findings indicate that gender does not operate as a general predictor of purchase intention, but rather as a context-dependent amplifier that becomes salient when presentation formats provide strong embodied and identity-relevant cues. Male shoppers tend to rely on selective, heuristic-based cues and evaluate products through goal-oriented identity projection (Bakewell & Mitchell, 2004; Otnes & McGrath, 2001). In this sense, mannequins may operate as identity-linked reference points, enabling men to rapidly simulate garment performance and assess social signaling value (Lin et al., 2019; Kim & Forsythe, 2008).

This outcome also reflects broader cultural shifts in fashion consumption. Contemporary menswear markets show increased aesthetic engagement, style expressivity, and fluid category boundaries, with men participating more actively in trend cycles and visual styling than in previous retail decades. As gendered fashion codes shift toward post-binary aesthetics and unisex presentation norms, mannequins may serve as significant symbolic carriers of self-expression for both woman and men (Paoletti, 2015). The stronger mannequin effect among men does not contradict prior gender-processing theories but refines them by showing that gender differences emerge specifically under conditions of embodied self-referencing rather than general visual richness.

The analysis revealed that age did not influence the relationship between product presentation format and purchase intention. Although hanger and mannequin display consistently produced higher purchase intentions than flat-lay, these effects remained stable across both age groups. The interaction terms for hanger × age and mannequin × age were not significant. This finding contrasts with previous research suggesting age-based differences in visual merchandising. Younger consumers are generally more sensitive to novelty, trend signaling, and expressive display formats (Vuong & Nguyen, 2018; Chen, 2021), whereas older consumers tend to prefer structured, cognitively accessible environments with realistic cues (Peng et al., 2016).

A plausible explanation lies in the nature of the stimulus. In this study, all formats provided perceptual information about garment shape and volume but lacked symbolic, lifestyle-oriented or trend-salient elements. As a result, younger participants were not exposed to expressive or identity-driven triggers that typically amplify generational differences (Parment, 2013). Mannequin displays provide an embodied visual representation of the product, reducing the cognitive effort required to mentally simulate fit and appearance. Prior research shows that older adults rely more strongly on schema-based processing and experience greater difficulty when information must be inferred from abstract or incomplete cues (Yoon, 1997; Carpenter & Yoon, 2012). By offering a concrete visual proxy of the human body, mannequins compensate for age-related declines in analytical processing. Older consumers can therefore evaluate the product with similar certainty as younger consumers, narrowing age-related differences and leading to non-significant moderation.

5. Conclusions and Limitations

5.1 Conclusion

This thesis examined how in-store product presentation formats shape consumers' purchase intentions in physical fashion retail environments. Against the backdrop of increasing digital competition and rising expectations toward experiential retail, the study demonstrates that product presentation is a central decision-making cue. By comparing flat-lay, on-hanger, and mannequin presentations, the research shows that three-dimensional display formats operate as powerful perceptual shortcuts and support consumer evaluation. Rather than relying solely on brand positioning or price, consumers draw strongly on visual and embodied cues provided by product presentation when forming purchase intentions.

A key contribution of the thesis lies in the on-hanger format, which has received limited empirical attention despite its widespread use in fashion retail. The findings position on-hanger displays as a highly effective yet underestimated presentation format. In doing so, the study challenges the assumption that mannequins represent the dominant or most persuasive three-dimensional display and broadens the conceptual scope of visual merchandising research.

Furthermore, the results show that the influence of presentation formats remains stable across brand contexts. The absence of moderation by brand type suggests that the cognitive and perceptual benefits of three-dimensional displays transcend luxury and fast-fashion positioning. At the same time, the observed gender differences highlight that visual merchandising does not affect all consumers uniformly. Mannequins appear to resonate more strongly with male consumers, reflecting evolving patterns of fashion engagement and identity.

In sum, the work advances visual merchandising research by identifying on-hanger displays as an overlooked but highly impactful three-dimensional stimulus, validating dual hedonic–cognitive pathways, and refining the role of demographic variation. The results underscore that presentation format itself not product, price or brand tier shapes how consumers evaluate, imagine and ultimately intend to purchase fashion items in physical store environments.

5.2 Theoretical Implications

This thesis advances research on visual merchandising by demonstrating that the type of offline product presentation flat lay, on-hanger, mannequin exerts a systematic influence on purchase intention that operates through two distinct psychological pathways: aesthetic appeal as a hedonic cue and perceived quality as a cognitive cue. By embedding these mechanisms in the SOR framework and linking them to the TPB, the study integrates but also empirically reinforces both theoretical perspectives by demonstrating that visual merchandising cues shape internal evaluations and subsequent behavioral intentions in predictable ways (Mehrabian & Russell, 1974; Ajzen, 1985). This contributes also to literature that has previously relied on online visual presentation studies, extending theoretical understanding to real in-store contexts.

The indirect effects of hanger and mannequin displays highlight that three-dimensional, body-related presentations act as powerful perceptual signals, helping consumers simulate usage, infer quality and translate these into intention strength. Building on this, the findings further contribute to cognition theory and mental simulation research (Barsalou, 2008; Yim et al., 2021). Three-dimensional presentations reduce the cognitive effort required to project oneself into a consumption scenario, activating self-referential processing and boosting psychological ownership (Kamleitner & Feuchtl, 2015). The comparable effectiveness of both formats suggests that the critical mechanism is not the specific display style itself, but the extent to which a presentation sufficiently supports mental simulation by providing visual information about silhouette, drape, and spatial garment properties. The findings reveal not only that three-dimensional displays outperform flat-lay formats, but also that on-hanger presentations consistently generated stronger effects than mannequin displays across main and indirect pathways. This constitutes a significant theoretical contribution, as prior literature has predominantly emphasized mannequins as the primary three-dimensional merchandising format, while empirical evidence on hanger-based displays remains underdeveloped.

Furthermore, the findings refine the role of context and consumer heterogeneity in visual merchandising theory. Unlike work that emphasizes strong brand-contingent effects, brand type luxury vs. fast fashion did not moderate the impact of presentation format, suggesting that embodied display cues may operate as relatively universal heuristics across positioning tiers when evaluated in isolated stimulus settings. At the same time, the stronger mannequin effect for men underscores that gender still shapes how consumers process and react to visual displays (Dinesha, 2022). Importantly, this pattern may also reflect broader shifts in contemporary

fashion culture, in which style engagement and sartorial expressiveness are no longer predominantly associated with women. Increasing male fashion involvement, the rise of gender-neutral aesthetics, and more fluid category boundaries (e.g., women purchasing from menswear, men integrating feminine silhouettes, and LGBTQ+ driven post-binary style norms) suggest that traditional gender distinctions in visual retail response are becoming more spectrum-based. In this context, mannequins may serve as identity-relevant reference points particularly for men, who increasingly use fashion not merely functionally but as a symbolic, expressive, and self-styling medium.

5.3 Managerial Implications

The results give clear, actionable guidance for fashion retailers. First, managers should strategically prioritize on-hanger and mannequin displays over flat-lay arrangements in high-visibility zones, as both three-dimensional formats substantially increase purchase intention via higher perceived aesthetics and quality, while flat lays remain better suited for stock density and purely informational functions. This means investing in sufficient hanger hardware and a smaller but well-curated set of mannequins, staging key looks, rather than attempting to elevate entire assortments with flat-folded tables.

Second, managers should recognize that three-dimensional formats activate two distinct psychological mechanisms. This dual-pathway effect underscores that visual merchandising is not merely decorative but operates as a strategic communication instrument. Well-executed hanger and mannequin displays serve as implicit quality signals that help consumers justify price differences and distinguish products from lower-end alternatives. Accordingly, executional precision clean garment spacing, consistent hanger orientation, premium hanger materials, lighting discipline, and well-styled mannequins should be treated as a core quality layer rather than a visual add-on.

Third, because format effects emerged consistently across both luxury and fast-fashion contexts, 3D displays offer comparable perceptual returns irrespective of brand tier. This provides strategic clarity for multi-brand environments (e.g., Breuninger, El Corte Inglés), where unified presentation guidelines can be adopted across positioning levels without diminishing effectiveness. Standardizing three-dimensional merchandising routines reduces

operational complexity, strengthens display consistency, and creates efficiency gains in training, dressing protocols, and fixture maintenance.

Finally, the findings call for a shift from storage-driven to perception-driven floor layouts. Curated vertical outfit clusters, coordinated hanger runs, and strategic golden-eye positioning support mental simulation, increased well time, and elevate product-self mapping. Rather than emphasizing abundance, retailers should employ curated visual storytelling that communicates fit, drape, and quality while maintaining aesthetic restraint. This means prioritizing investment in format infrastructure high-quality hangers, versatile mannequins, lighting calibration and spacing standards over assortment inflation.

5.4 Limitation and Future Research

Although this study provides meaningful theoretical and managerial insights into how product presentation formats shape consumer responses in fashion retail, several limitations must be acknowledged. These limitations offer important pathways for refinement and further investigation. A first limitation concerns the sampling approach and the resulting external validity of the findings.

The survey was distributed primarily within the researcher's personal and professional network (Johnson et al., 2000), resulting in a convenience sample with limited diversity. Consequently, the sample overrepresented younger, digitally literate participants, mainly students and early-career professionals and limited diversity in age, professional background, and purchase motivations. Nearly half of the sample fell into the 25–34 age group, while respondents aged 45+ were underrepresented. These characteristics may have amplified the positive responses to mannequin and on-hanger displays.

The binary operationalization of age further oversimplified demographic variation and likely contributed to the absence of significant moderation effects in H4: generational differences in shopping goals, visual processing and involvement (e.g., Gen Z trend sensitivity vs. Millennials' price–value orientation) cannot be captured through a simple split. The same sampling imbalance applies to gender. Male respondents formed a disproportionate share of the sample (n= 191 males; n= 127 female), which likely could have biased the results. Future research should therefore implement more granular segmentation, fashion involvement scales, or lifestyle indicators, and recruit from a broader pool of industries, age brackets, and cultural

contexts (Hofstede, 2011). Larger, more balanced distributed and culturally diverse samples would enable the identification of subgroup-specific response patterns and enhance the generalizability of results.

A second limitation arises from the experimental environment. Participants evaluated static two-dimensional stimuli within an online setting, and each respondent was exposed to only one presentation format. While this between-subjects design reduces demand characteristics, it increases unexplained variance and prevents within-person comparison of formats. Moreover, the virtual context lacks core properties of physical retail environments, tactile interaction, atmospheric cues such as scent or lighting, guided navigation, or social presence. These contextual dimensions can significantly alter purchase decisions, particularly for tactile categories such as quality. The study relied exclusively on self-reported intentions, which are vulnerable to social desirability and affective miscalibration: participants may overestimate intentions or aesthetic evaluations because they feel expected to respond positively to "good" displays (Fischer, 1993). Integrating behavioral indicators such as eye tracking, browsing patterns or incentivized choice would provide a more robust understanding of how consumers act rather than how they declare they would act.

A third limitation relates to the non-significant moderation of brand type. Although participants correctly identified luxury and fast-fashion stimuli. Luxury consumption is multimodal and experienced through architectural staging, spatial openness, curated product density, and service encounters. In the absence of these elements, participants are likely to form abstract brand associations rather than embodied psychological states such as exclusivity, craftsmanship or prestige. Future studies should incorporate immersive methods such as VR-based store environments, 360° simulations, or in-store field experiments to reproduce the sensory and symbolic dimensions of retail contexts and to examine how presentation formats interact with brand identity under realistic conditions (Roche et al., 2025).

Finally, the stimulus set simplified presentation formats to a single exemplar of each. In practice, visual merchandising encompasses substantial within-format variation abstract vs. realistic mannequins, body diversity, posed vs. neutral stances, vertical vs. horizontal hanger arrangements, curated outfit clusters, or folded commercial flat-lays versus editorial compositions. Reducing formats to static prototypes likely suppressed meaningful variance and may have contributed to nonsignificant moderation effects. Future research should

systematically vary display typologies to identify which specific presentation attributes drive aesthetic, quality and purchase intention.

Addressing these limitations would strengthen the empirical robustness of visual merchandising research and deepen theoretical understanding of how presentation stimuli shape consumer cognition, emotion and behavior. Future work should seek to integrate ecological realism, multidimensional consumer heterogeneity, and richer psychological mechanisms to refine the conceptualization of visual product displays.

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Appendices

Appendix 1: Study Preparation and Materials

Appendix 1.1: Stimuli

Condition	Brand Type	Presentation Format	Stimulus Description
1	Luxury	Flat-lay	Coordinated outfit: white short-sleeve T-shirt, beige tailored trousers, and a beige baseball cap. All items were neatly folded and symmetrically arranged on a dark wooden surface in a minimalist luxury store setting. The display emphasized order, material quality, low visual clutter, and aesthetic refinement through neutral color tones and soft, warm lighting.
2	Luxury	On-hanger	Coordinated garments: white short-sleeve T-shirt, beige tailored trousers, and a neutral-toned outer layer displayed on high-quality hangers. Items were spaced evenly to allow full visibility of silhouette, fabric drape, and construction details. The background was dark and minimalist, reinforcing craftsmanship and exclusivity.
3	Luxury	Mannequin	Full outfit styled on a mannequin, consisting of a white T-shirt, beige tailored trousers, and a neutral knitwear layer draped over the shoulders, complemented by a beige cap. The

			mannequin was placed in a curated luxury store environment with uncluttered surroundings and lighting designed to highlight texture and material quality.
4	Fast Fashion	Flat-lay	Multiple folded garments including white and beige T-shirts, light-colored trousers, knitwear, and accessories arranged on a light-toned display table. The presentation emphasized high product density, accessibility, and visual order, using neutral and pastel color tones under bright, uniform store lighting.
5	Fast Fashion	On-hanger	T-shirt and trousers styled as complete outfits and displayed on closely spaced hangers in a fast-fashion retail environment. Repetition of similar items and neutral color tones emphasized availability, efficiency, and quick browsing within a standardized store layout.
6	Fast Fashion	Mannequin	Complete outfit displayed on a mannequin, consisting of a white T-shirt, beige trousers, and a casual outer layer. The mannequin was positioned in an open, brightly lit fast-fashion store environment, emphasizing trendiness, immediacy, and ease of replication across stores.

Appendix 1.2: Focus group

Dimension	Participants
Aesthetic Appeal	Clean, minimal, balanced, harmonious, intentional, calm, visually pleasing, perfect coordination, want to take a picture of it ("Instagrammable"), neutral background, simple but focus, looks high-quality, organized, less is more, feeling of exclusivity, perfection, symmetry, elegant
Perceived Quality	Craftsmanship, well-made, durable, premium materials, attention to detail, professional, careful, afraid to touch, compare, expensive, precise, handwork, art, high standard, looks fragile but valuable, worth the price

Luxury Fashion

Presentation style	Participants
Mannequin	• Mannequin images were described as elegant, calm, and visually controlled • Participants perceived them as highly aesthetic, with perfect coordination, symmetry, and a strong sense of exclusivity • increased emotional desire and confidence, although high prices sometimes limited actual purchase intention • create a certain psychological and practical distance. The garments are not always easy to locate within the store, and some participants reported hesitation to physically interact with or touch the items, as well as reluctance to ask sales staff for assistance. • mannequin presentations help them better visualize how the garment would look when worn and how it might fit their own body.
On Hanger	• perceived as minimalist, orderly, refined and trendy. • Participants appreciated the clarity and focus on individual pieces. The presentation communicated professionalism, allowing participants to assess materials and construction. • Purchase intention was moderate, driven more by trust and rational evaluation than emotion.

	• hanger presentations allow for quick and efficient comparison between different items. • They noted that holding garments against their own body helps assess length and proportions, which is perceived as practical, particularly when time is limited or when fitting rooms are crowded or unavailable.
Flat lay	• were described as curated and visually pleasing but somewhat distant. • Participants associated them with attention to detail and surface quality yet found it harder to assess fit and structure. • The presentation was seen as aesthetic and informative

Fast Fashion

Mannequin	• Fast fashion mannequin images were perceived as dynamic, relatable, and lifestyle oriented. • While mannequins improved aesthetic appeal, perceived quality remained moderate, with some skepticism regarding durability • The images encouraged browsing • mannequin presentations in fast fashion stores were perceived as less refined and less premium compared to luxury mannequin displays, which contributed to a comparatively lower-quality impression.
On Hanger	• hanger images were described as practical, transparent, and easy to navigate. • Participants valued the ability to quickly scan and compare items. • The presentation felt honest and functional -> supporting trust
Flat lay	• Fast fashion flat lay images were often perceived as crowded Participants noted reduced visual focus and weaker quality cues due to stacking and wrinkles. • The presentation was mainly seen as background

	• folded garments are easily overlooked, especially when displayed at lower heights within the store. • Participants associated flat lay displays in fast fashion with basic, everyday garments, perceiving them as less distinctive and less attention-grabbing.

Appendix 1.3: Aesthetic

Case Processing Summary

		N	%
Cases	Valid	52	100,0
	Excluded[a]	0	,0
	Total	52	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,702	7

Item Statistics

	Mean	Std. Deviation	N
The in-store product presentation looks aesthetically pleasing.	5,92	1,341	52
The way the product is displayed in-store looks visually attractive.	6,04	1,328	52
The in-store presentation appears organized and orderly.	3,40	1,376	52
The way the product is presented in-store feels harmonious and balanced.	5,67	1,264	52
The in-store product presentation appears clean and visually coherent	6,10	1,142	52
The overall in-store presentation feels pleasant and visually satisfying.	6,12	,900	52
The overall in-store presentation looks stylish and well-presented.	2,71	1,786	52

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The in-store product presentation looks aesthetically pleasing.	30,04	21,763	,596	,618
The way the product is displayed in-store looks visually attractive.	29,92	21,876	,594	,619
The in-store presentation appears organized and orderly.	32,56	24,997	,300	,698
The way the product is presented in-store feels harmonious and balanced.	30,29	22,680	,560	,631
The in-store product presentation appears clean and visually coherent	29,87	23,883	,522	,645
The overall in-store presentation feels pleasant and visually satisfying.	29,85	25,544	,513	,658
The overall in-store presentation looks stylish and well-presented.	33,25	26,701	,061	,788

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
35,96	31,018	5,569	7

Appendix 1.3: Perceived Quality

Case Processing Summary

		N	%
Cases	Valid	52	100,0
	Excluded[a]	0	,0
	Total	52	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,612	7

Item Statistics

	Mean	Std. Deviation	N
The way the product is presented in-store appears to be of high quality.	5,85	1,601	52
The in-store product presentation looks well-made and durable.	5,62	1,574	52
The in-store product presentation looks flawless and precise.	5,50	1,651	52
The way the product is displayed in-store conveys high reliability.	4,85	1,797	52
The in-store product presentation looks professional and carefully executed.	2,75	1,824	52
The way the product is presented in-store appears long-lasting and durable.	6,08	,882	52
The way the product is displayed in-store reflects attention to detail.	5,06	1,697	52

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The way the product is presented in-store appears to be of high quality.	29,85	28,682	,384	,555
The in-store product presentation looks well-made and durable.	30,08	24,739	,678	,448
The in-store product presentation looks flawless and precise.	30,19	25,923	,546	,494
The way the product is displayed in-store conveys high reliability.	30,85	32,250	,115	,651
The in-store product presentation looks professional and carefully executed.	32,94	35,036	-,025	,698
The way the product is presented in-store appears long-lasting and durable.	29,62	34,006	,296	,593
The way the product is displayed in-store reflects attention to detail.	30,63	26,472	,485	,515

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
35,69	37,825	6,150	7

Appendix 1.3: Purchase Intention

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	52	100,0
	Excluded[a]	0	,0
	Total	52	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,568	7

Item Statistics

	Mean	Std. Deviation	N
I would consider buying this product based on the way it's presented in-store.	5,73	1,634	52
This in-store display inspires me to want to own the product.	6,04	1,328	52
Based on its in-store presentation, I would choose this product.	3,40	1,376	52
The in-store product presentation increases my willingness to buy this product.	5,88	1,504	52
The way the product is displayed in-store makes me more likely to buy the product.	6,10	1,089	52
The product displayed this way in-store makes me feel confident in purchasing.	4,12	1,947	52
This in-store product presentation increases my desire to purchase it over similar alternatives.	2,75	1,835	52

Item-Total Statistics

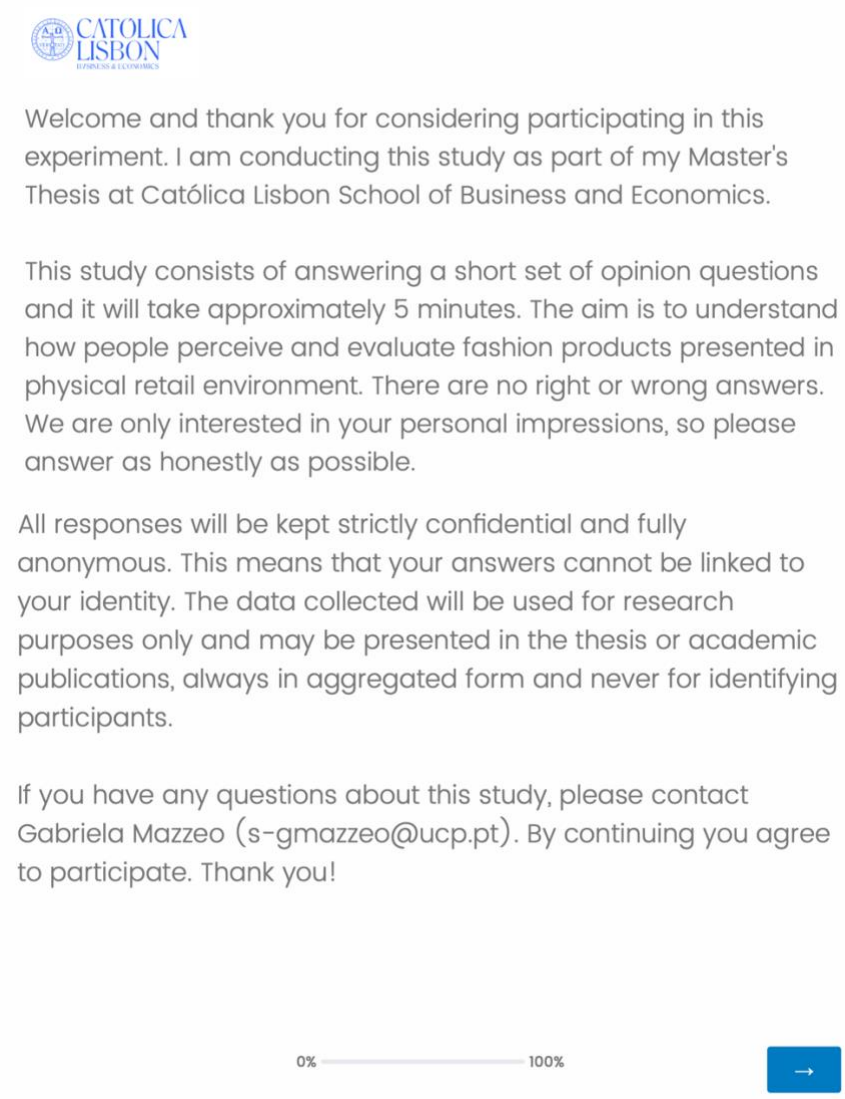
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I would consider buying this product based on the way it's presented in-store.	28,29	25,386	,300	,526
This in-store display inspires me to want to own the product.	27,98	25,039	,466	,473
Based on its in-store presentation, I would choose this product.	30,62	25,771	,382	,500
The in-store product presentation increases my willingness to buy this product.	28,13	24,119	,448	,470
The way the product is displayed in-store makes me more likely to buy the product.	27,92	26,621	,462	,490
The product displayed this way in-store makes me feel confident in purchasing.	29,90	25,618	,182	,584
This in-store product presentation increases my desire to purchase it over similar alternatives.	31,27	29,377	,013	,646

Scale Statistics

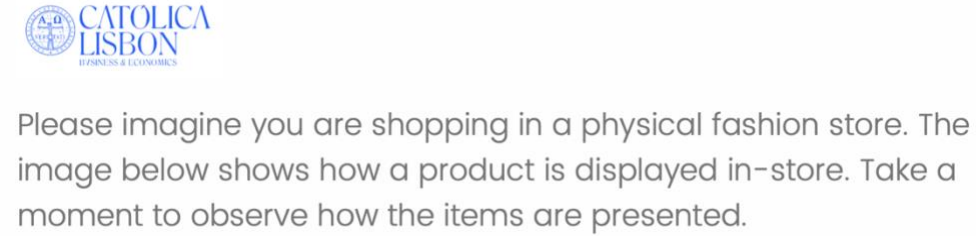
Mean	Variance	Std. Deviation	N of Items
34,02	33,000	5,745	7

Appendix 2: Survey

Appendix 2.1: Introduction



Appendix 2.2: Randomized Stimuli – 6 Groups



Luxury x Flat lay

Luxury x Hanger

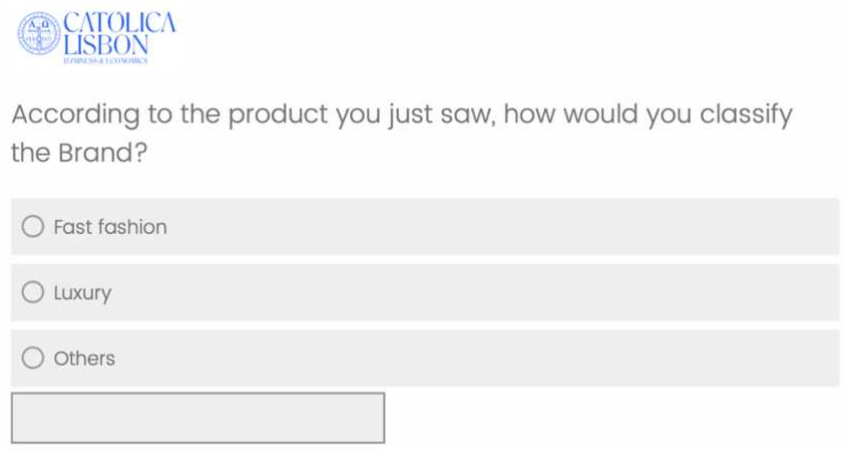
Luxury x Mannequin

Fast fashion x Flat lay

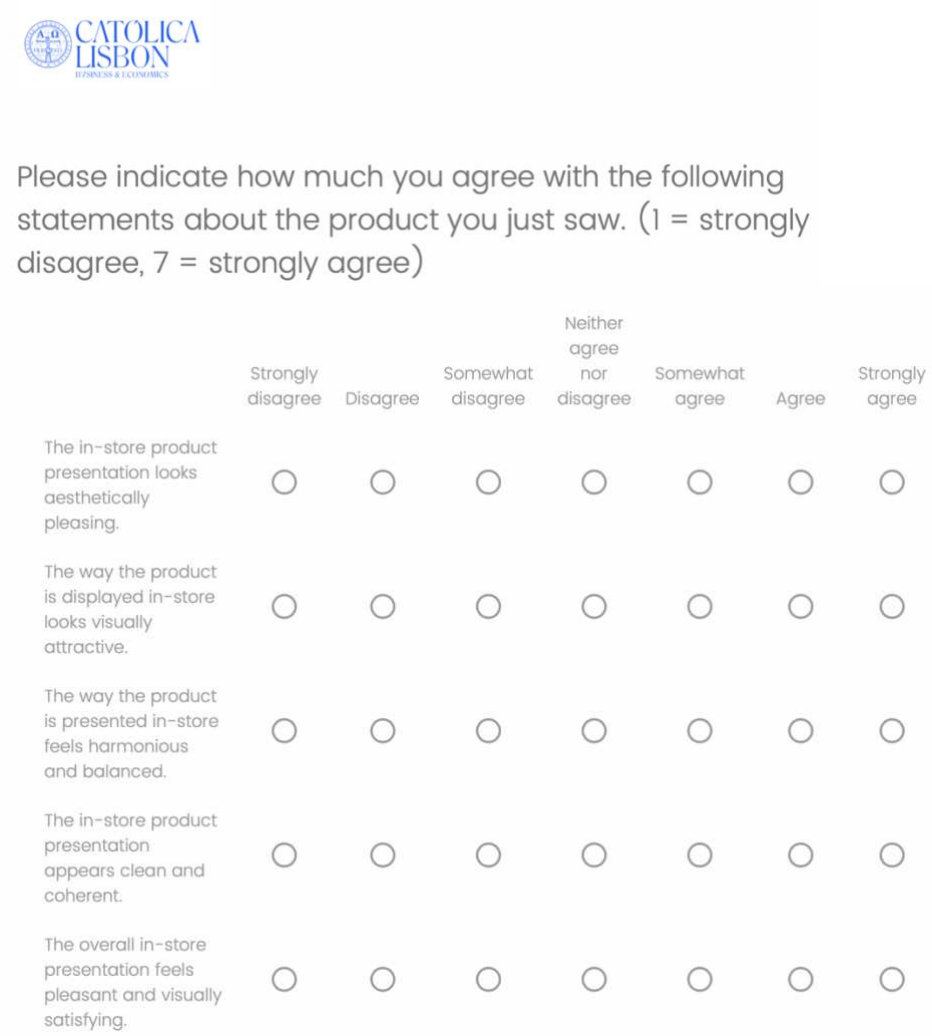
Fast fashion x Hanger

Fast fashion x Mannequin

Appendix 2.3: Manipulation Check



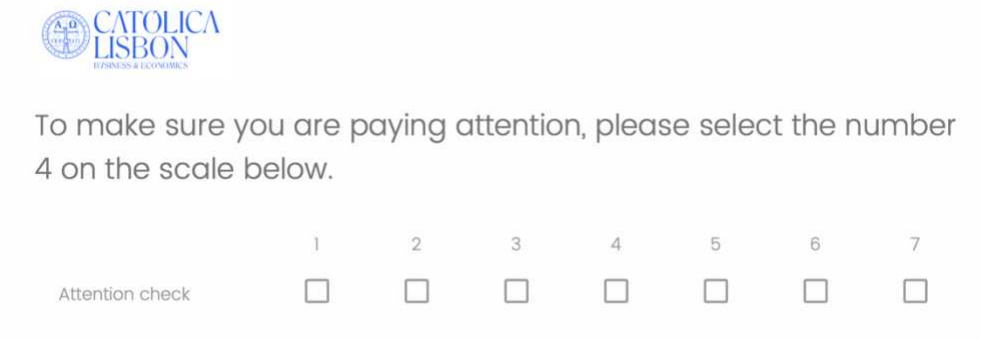
Appendix 2.4: Evaluation Check



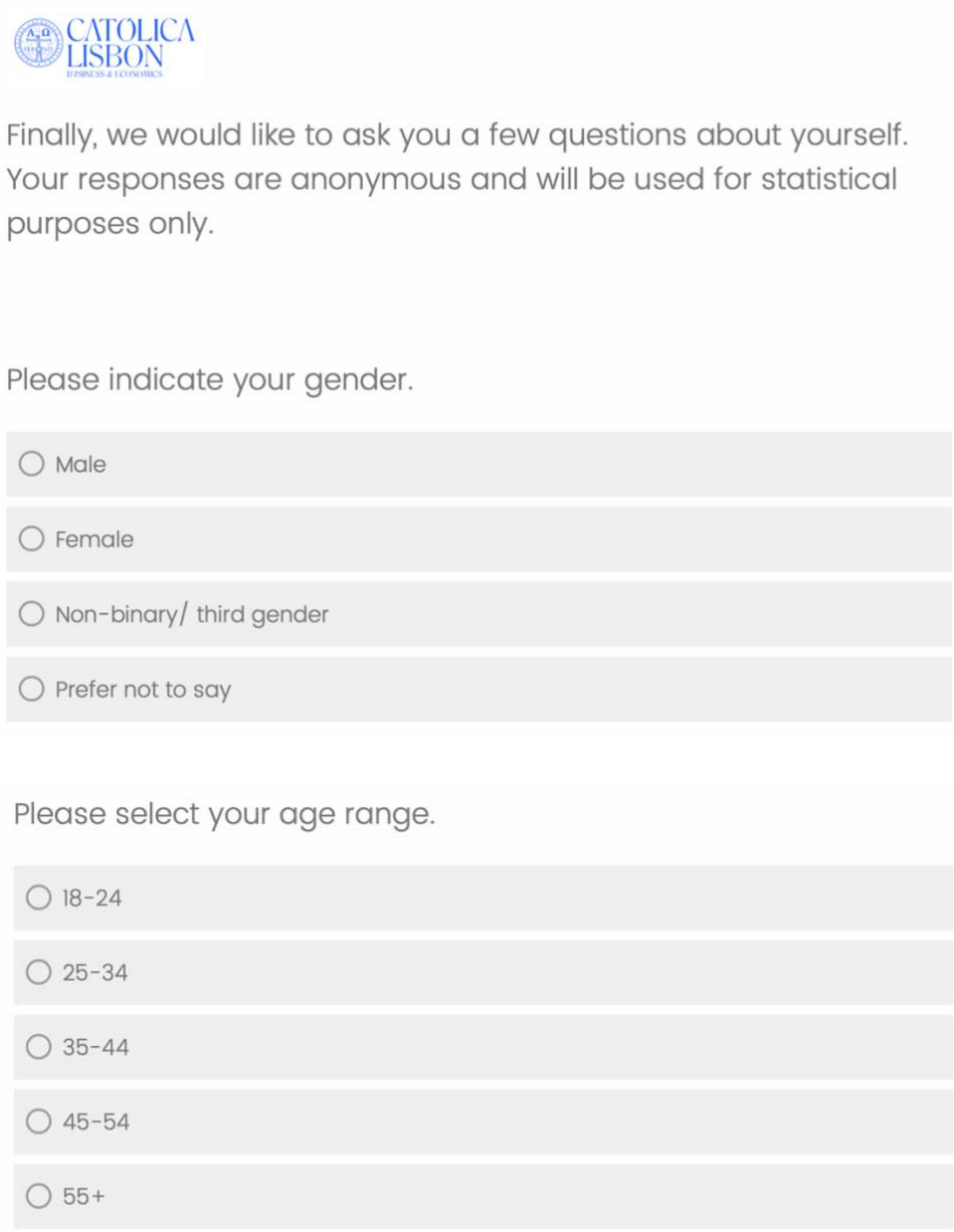
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The way the product is presented in-store appears to be of high quality.	○	○	○	○	○	○	○
The in-store product presentation looks flawless and precise.	○	○	○	○	○	○	○
The in-store product presentation makes the product appear durable and long-lasting.	○	○	○	○	○	○	○
The in-store product presentation looks professional and carefully executed.	○	○	○	○	○	○	○
The way the product is displayed in-store reflects attention to detail.	○	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I would consider buying this product based on the way it's presented in-store.	○	○	○	○	○	○	○
Based on the in-store presentation, I would choose this product.	○	○	○	○	○	○	○
The in-store display inspires me to want to own the product.	○	○	○	○	○	○	○
This in-store product presentation increases my willingness to buy this product.	○	○	○	○	○	○	○
The way the product is displayed in-store makes me more likely to buy the product.	○	○	○	○	○	○	○

Appendix 2.5: Attention check



Appendix 2.6: Demographic



Please indicate your highest completed level of education.

- ◯ High School or equivalent
- ◯ College or university
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctorate or higher
- ◯ Other

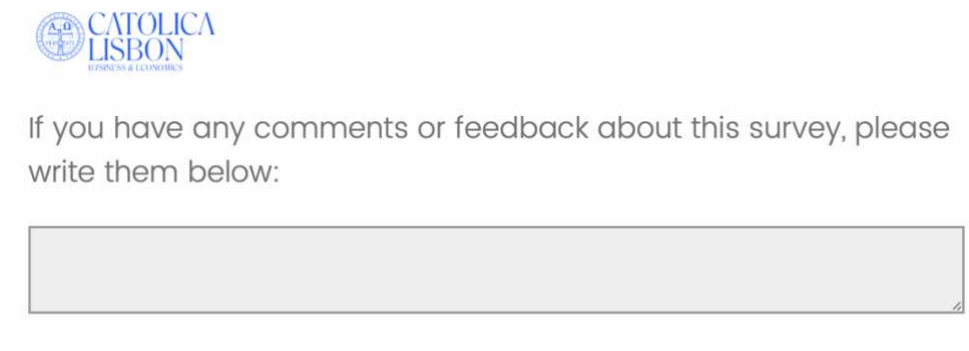
How frequently do you buy fashion items in-store?

- ◯ Less than once a month
- ◯ Once a month
- ◯ 2-3 times per month
- ◯ Once a week
- ◯ Several times per week

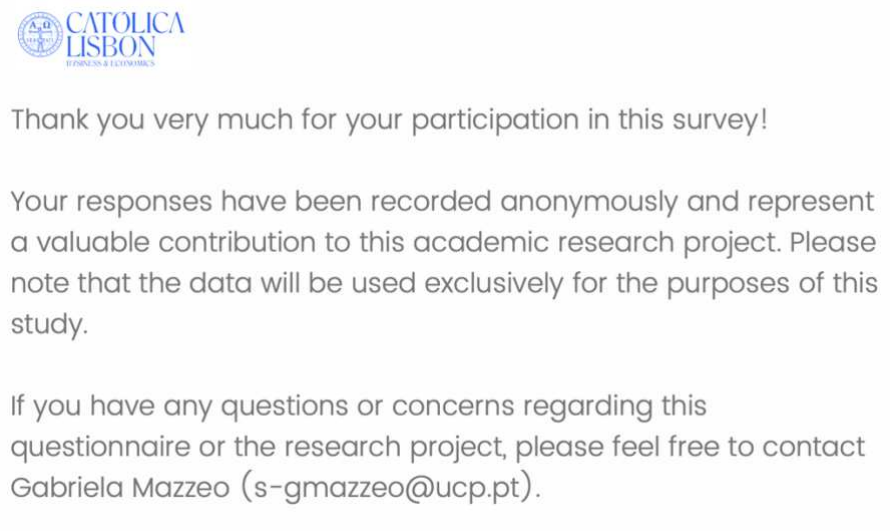
Please indicate your nationality.

- ◯ German
- ◯ Portuguese
- ◯ Spanish
- ◯ Italian
- ◯ French
- ◯ Other

Appendix 2.7: Feedback



Appendix 2.8: Survey completion



Appendix 3: Population Statistics

Appendix 3.1: Gender distribution

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	191	59,1	59,1	59,1
	Female	127	39,3	39,3	98,5
	Non-binary/ third gender	4	1,2	1,2	99,7
	Prefer not to say	1	,3	,3	100,0
	Total	323	100,0	100,0	

Appendix 3.2: Age distribution

Age range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	67	20,7	20,7	20,7
	25-34	158	48,9	48,9	69,7
	35-44	56	17,3	17,3	87,0
	45-54	33	10,2	10,2	97,2
	55+	9	2,8	2,8	100,0
	Total	323	100,0	100,0	

Appendix 3.3: Education distribution

Highest completed level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School or equivalent	135	41,8	41,8	41,8
	College or university	74	22,9	22,9	64,7
	Bachelor's degree	66	20,4	20,4	85,1
	Master's degree	33	10,2	10,2	95,4
	Doctorate or higher	9	2,8	2,8	98,1
	Other	6	1,9	1,9	100,0
	Total	323	100,0	100,0	

Appendix 3.4: Nationality distribution

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	German	213	65,9	65,9	65,9
	Portuguese	34	10,5	10,5	76,5
	Spanish	17	5,3	5,3	81,7
	Italian	37	11,5	11,5	93,2
	French	11	3,4	3,4	96,6
	Other	11	3,4	3,4	100,0
	Total	323	100,0	100,0	

Nationality_Other_Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		312	96,6	96,6	96,6
	Croatian	1	,3	,3	96,9
	Maroccan	1	,3	,3	97,2
	Persian	1	,3	,3	97,5
	Peruvian	6	1,9	1,9	99,4
	Turkish	1	,3	,3	99,7
	UK	1	,3	,3	100,0
	Total	323	100,0	100,0	

Appendix 3.5: In-store fashion purchase frequency

How frequently do you buy fashion items in-store?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than once a month	104	32,2	32,2	32,2
	Once a month	95	29,4	29,4	61,6
	2-3 times per month	79	24,5	24,5	86,1
	Once a week	29	9,0	9,0	95,0
	Several times per week	16	5,0	5,0	100,0
	Total	323	100,0	100,0	

Appendix 4: Hypothesis Testing

Appendix 4.1: H1

Between-Subjects Factors

		Value Label	N
Presentationtype	1	Hanger	112
	2	Mannequin	104
	3	Flat	107

Descriptive Statistics

Dependent Variable: mean score PI

Presentationtype	Mean	Std. Deviation	N
Hanger	5,4161	1,33021	112
Mannequin	5,2654	1,40109	104
Flat	3,4766	1,54618	107
Total	4,7251	1,67427	323

Levene's Test of Equality of Error Variances[a]

Dependent Variable: mean score PI

F	df1	df2	Sig.
3,108	2	320	,046

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + age_d + gender_d + Ptype_n

Tests of Between-Subjects Effects

Dependent Variable: mean score PI

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	252,120[a]	4	63,030	30,812	<,001	,279
Intercept	88,449	1	88,449	43,238	<,001	,120
age_d	,290	1	,290	,142	,707	,000
gender_d	1,189	1	1,189	,581	,446	,002
Ptype_n	249,170	2	124,585	60,903	<,001	,277
Error	650,507	318	2,046			
Total	8114,040	323				
Corrected Total	902,627	322				

a. R Squared = ,279 (Adjusted R Squared = ,270)

Parameter Estimates

Dependent Variable: mean score PI

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound	Partial Eta Squared
Intercept	2,976	,649	4,587	<,001	1,699	4,252	,062
age_d	,065	,173	,376	,707	-,276	,406	,000
gender_d	,492	,645	,762	,446	-,777	1,761	,002
[Ptype_n=1]	1,938	,193	10,023	<,001	1,558	2,319	,240
[Ptype_n=2]	1,781	,197	9,027	<,001	1,393	2,169	,204
[Ptype_n=3]	0[a]	.	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

Estimated Marginal Means

Presentationtype

Estimates

Dependent Variable: mean score PI

Presentationtype	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Hanger	5,418[a]	,135	5,152	5,684
Mannequin	5,260[a]	,140	4,984	5,537
Flat	3,480[a]	,138	3,208	3,752

a. Covariates appearing in the model are evaluated at the following values: age = ,3034, Gender = 1 or Gender = 2 (FILTER) = , 98.

Pairwise Comparisons

Dependent Variable: mean score PI

(I) Presentationtype	(J) Presentationtype	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	95% Confidence Interval for Difference[b] Upper Bound
Hanger	Mannequin	,157	,195	1,000	-,312	,627
	Flat	1,938*	,193	<,001	1,473	2,403
Mannequin	Hanger	-,157	,195	1,000	-,627	,312
	Flat	1,781*	,197	<,001	1,306	2,255
Flat	Hanger	-1,938*	,193	<,001	-2,403	-1,473
	Mannequin	-1,781*	,197	<,001	-2,255	-1,306

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: mean score PI

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	249,170	2	124,585	60,903	<,001	,277
Error	650,507	318	2,046			

The F tests the effect of Presentationtype. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Appendix 4.2: H2a

```
Run MATRIX procedure:

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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: PI_score
      X: prest_f
      M: AE_score

Sample
Size:  323

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************

OUTCOME VARIABLE:
 AE_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5299      ,2807     2,0434    62,4535     2,0000   320,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,6318      ,1382    26,2803      ,0000     3,3599     3,9037
X1           1,9218      ,1932     9,9450      ,0000     1,5416     2,3020
X2           1,8509      ,1968     9,4032      ,0000     1,4637     2,2382

**************************************************************************

OUTCOME VARIABLE:
 PI_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8749      ,7655      ,6637   347,0250     3,0000   319,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,4965      ,1400     3,5471      ,0004      ,2211      ,7718
X1            ,3624      ,1260     2,8765      ,0043      ,1145      ,6103
X2            ,2699      ,1267     2,1298      ,0340      ,0206      ,5192
AE_score      ,8206      ,0319    25,7577      ,0000      ,7579      ,8833
```

```
****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ******************

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1      ,3624      ,1260     2,8765      ,0043      ,1145      ,6103
X2      ,2699      ,1267     2,1298      ,0340      ,0206      ,5192

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      ,0062     4,2424     2,0000   319,0000      ,0152
----------

Relative indirect effects of X on Y

 prest_f     ->    AE_score    ->    PI_score

       Effect     BootSE   BootLLCI   BootULCI
X1     1,5770      ,1848     1,2183     1,9469
X2     1,5188      ,1863     1,1553     1,8920

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

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 4.2.1: H2a + control variable

```
Run MATRIX procedure:

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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: PI_score
      X: prest_f
      M: AE_score

Covariates:
 gender_d

Sample
Size:  318

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************

OUTCOME VARIABLE:
 AE_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5472      ,2994     1,9886    44,7267     3,0000   314,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,9264      ,1629    24,1028      ,0000     3,6059     4,2469
X1           1,9298      ,1925    10,0271      ,0000     1,5512     2,3085
X2           1,9173      ,1977     9,7000      ,0000     1,5284     2,3062
gender_d     -,5191      ,1634    -3,1762      ,0016     -,8407     -,1975

**************************************************************************
```

```
OUTCOME VARIABLE:
 PI_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8874      ,7874      ,6089   289,8758     4,0000   313,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,1601      ,1522     1,0519      ,2937     -,1394      ,4595
X1            ,3374      ,1224     2,7568      ,0062      ,0966      ,5781
X2            ,1986      ,1247     1,5930      ,1122     -,0467      ,4440
AE_score      ,8498      ,0312    27,2114      ,0000      ,7883      ,9112
gender_d      ,3780      ,0919     4,1140      ,0000      ,1972      ,5588


Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1      ,3374      ,1224     2,7568      ,0062      ,0966      ,5781
X2      ,1986      ,1247     1,5930      ,1122     -,0467      ,4440

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      ,0052     3,8107     2,0000   313,0000      ,0232
----------

Relative indirect effects of X on Y

 prest_f     ->    AE_score    ->    PI_score

       Effect     BootSE   BootLLCI   BootULCI
X1     1,6399      ,1812     1,2848     1,9974
X2     1,6292      ,1847     1,2685     1,9886

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

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 4.3: H2b

```
Run MATRIX procedure:

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***************** 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: PI_score
      X: prest_f
      M: PQ_score

Sample
Size:  323

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************
```

```
OUTCOME VARIABLE:
 PQ_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5412      ,2929     1,8862    66,2611     2,0000   320,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,5533      ,1328    26,7623      ,0000     3,2921     3,8145
X1           1,9146      ,1857    10,3123      ,0000     1,5493     2,2799
X2           1,8160      ,1891     9,6023      ,0000     1,4439     2,1880

**************************************************************************

OUTCOME VARIABLE:
 PI_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8861      ,7851      ,6079   388,5803     3,0000   319,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,3811      ,1356     2,8099      ,0053      ,1143      ,6480
X1            ,2715      ,1217     2,2317      ,0263      ,0321      ,5109
X2            ,2067      ,1219     1,6966      ,0907     -,0330      ,4465
PQ_score      ,8712      ,0317    27,4502      ,0000      ,8087      ,9336



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

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1      ,2715      ,1217     2,2317      ,0263      ,0321      ,5109
X2      ,2067      ,1219     1,6966      ,0907     -,0330      ,4465

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      ,0035     2,5703     2,0000   319,0000      ,0781
----------

Relative indirect effects of X on Y

 prest_f     ->    PQ_score    ->    PI_score

       Effect     BootSE   BootLLCI   BootULCI
X1     1,6679      ,1810     1,3159     2,0320
X2     1,5820      ,1764     1,2350     1,9327

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

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 4.3.1: H2b + control variables

```
Run MATRIX procedure:

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***************** 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: PI_score
      X: prest_f
      M: PQ_score

Covariates:
 gender_d

Sample
Size:  318

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************

OUTCOME VARIABLE:
 PQ_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5481      ,3005     1,8783    44,9536     3,0000   314,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     3,7176      ,1583    23,4815      ,0000     3,4061     4,0291
X1           1,9275      ,1870    10,3049      ,0000     1,5595     2,2956
X2           1,8716      ,1921     9,7433      ,0000     1,4937     2,2496
gender_d     -,3026      ,1588    -1,9049      ,0577     -,6151      ,0100

**************************************************************************
OUTCOME VARIABLE:
 PI_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8905      ,7930      ,5930   299,7623     4,0000   313,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,2282      ,1477     1,5450      ,1234     -,0624      ,5187
X1            ,2826      ,1216     2,3246      ,0207      ,0434      ,5218
X2            ,1823      ,1232     1,4803      ,1398     -,0600      ,4247
PQ_score      ,8792      ,0317    27,7264      ,0000      ,8168      ,9416
gender_d      ,2029      ,0898     2,2603      ,0245      ,0263      ,3795
```

```
****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ******************

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1      ,2826      ,1216     2,3246      ,0207      ,0434      ,5218
X2      ,1823      ,1232     1,4803      ,1398     -,0600      ,4247

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      ,0036     2,7028     2,0000   313,0000      ,0686
----------

Relative indirect effects of X on Y

 prest_f     ->    PQ_score    ->    PI_score

       Effect     BootSE   BootLLCI   BootULCI
X1     1,6946      ,1827     1,3447     2,0699
X2     1,6455      ,1867     1,2903     2,0293

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

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 4.4: H3

```
Run MATRIX procedure:

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***************** 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: 1
      Y: PI_score
      X: prest_f
      W: Brand_D

Sample
Size:  323

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************

OUTCOME VARIABLE:
 PI_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,6840      ,4679     1,5151    55,7496     5,0000   317,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     2,7038      ,1707    15,8402      ,0000     2,3680     3,0397
X1           1,9369      ,2392     8,0990      ,0000     1,4664     2,4074
X2           1,9036      ,2392     7,9596      ,0000     1,4330     2,3741
Brand_D      1,5034      ,2381     6,3147      ,0000     1,0350     1,9719
Int_1        -,0062      ,3330     -,0187      ,9851     -,6613      ,6489
Int_2        -,1348      ,3392     -,3975      ,6912     -,8022      ,5325
```

```
Product terms key:
 Int_1    :        X1       x        Brand_D
 Int_2    :        X2       x        Brand_D

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      ,0003      ,1009     2,0000   317,0000      ,9041

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

Level of confidence for all confidence intervals in output:
  95,0000

------ END MATRIX -----
```

Appendix 4.5: H4a

```
[DataSet1] /Users/gabrielamazzeo/Desktop/thesis pictures/gender worked .sav


Run MATRIX procedure:

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***************** 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: 1
      Y: PI_score
      X: prest_f
      W: gender_d

Sample
Size:  318

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************

OUTCOME VARIABLE:
 PI_score

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5678      ,3224     1,9474    29,6857     5,0000   312,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,8490      ,1994    19,3070      ,0000     3,4567     4,2412
X1           1,7135      ,2834     6,0464      ,0000     1,1559     2,2711
X2            ,7577      ,3235     2,3421      ,0198      ,1212     1,3942
gender_d     -,7240      ,2730    -2,6521      ,0084    -1,2611     -,1869
Int_1         ,5034      ,3828     1,3153      ,1894     -,2497     1,2565
Int_2        1,6735      ,4076     4,1061      ,0001      ,8716     2,4754
```

```
Product terms key:
 Int_1    :        X1       x        gender_d
 Int_2    :        X2       x        gender_d

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0378     8,7003     2,0000   312,0000      ,0002
----------
    Focal predict: prest_f  (X)
          Mod var: gender_d (W)


Conditional effects of the focal predictor at values of the moderator(s):

Moderator value(s):
gender_d      ,0000

       Effect         se          t          p       LLCI       ULCI
X1     1,7135      ,2834     6,0464      ,0000     1,1559     2,2711
X2      ,7577      ,3235     2,3421      ,0198      ,1212     1,3942

Test of equality of conditional means
          F        df1        df2          p
    18,3272     2,0000   312,0000      ,0000

Estimated conditional means being compared:
    prest_f   PI_score
     1,0000     3,8490
     2,0000     5,5625
     3,0000     4,6067
----------
Moderator value(s):
gender_d     1,0000

       Effect         se          t          p       LLCI       ULCI
X1     2,2169      ,2573     8,6174      ,0000     1,7107     2,7231
X2     2,4312      ,2479     9,8072      ,0000     1,9434     2,9189

Test of equality of conditional means
          F        df1        df2          p
    55,6982     2,0000   312,0000      ,0000

Estimated conditional means being compared:
    prest_f   PI_score
     1,0000     3,1250
     2,0000     5,3419
     3,0000     5,5562

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

Level of confidence for all confidence intervals in output:
  95,0000

------ END MATRIX -----
```

Appendix 4.6: H4b

```
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: 1
      Y: PI_score
      X: prest_f
      W: age_d

Sample
Size:  323

Coding of categorical X variable for analysis:
 prest_f      X1      X2
   1,000    ,000    ,000
   2,000   1,000    ,000
   3,000    ,000   1,000

**************************************************************************

OUTCOME VARIABLE:
 PI_score

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      ,5343      ,2855     2,0344    25,3348     5,0000   317,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     3,5870      ,1625    22,0677      ,0000     3,2672     3,9068
X1           1,7396      ,2284     7,6158      ,0000     1,2902     2,1890
X2           1,5898      ,2364     6,7238      ,0000     1,1246     2,0550
age_d        -,3937      ,3070    -1,2824      ,2006     -,9977      ,2103
Int_1         ,6974      ,4262     1,6364      ,1028     -,1411     1,5359
Int_2         ,6569      ,4264     1,5404      ,1245     -,1821     1,4959

Product terms key:
 Int_1    :        X1       x        age_d
 Int_2    :        X2       x        age_d


 Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
 X*W      ,0075     1,6662     2,0000   317,0000      ,1906

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

 Level of confidence for all confidence intervals in output:
   95,0000

 ------ END MATRIX -----
```