

Examining the Mediating Role of Egyptian Women's Attitude in the Relationship between Pink Marketing Strategies and their Buying Behavior: A Field Study on Personal Care Products

Rehab Mohamed Mahmoud El Bordiny ^{a,*}

^a Faculty of Management Sciences, MSA University, 6th of October, Egypt.

* *Corresponding author:* rmohammed@msa.edu.eg

Abstract

Pink marketing is one of the new terminologies that emerged in the 21st century. However, past studies and the exploratory research showed that the concept of pink marketing is still narrowly applied in Egypt, which makes women's attitudes and buying behavior toward pink products unclear. Accordingly, this research contributes to the literature by examining how pink marketing strategies can affect Egyptian women's buying behavior of pink products. A field study was conducted on women consumers of personal care products using a non-probability convenience sample, and the collected data were analyzed using structural equation modeling by SPSSv26 and R Studio. The analysis proved a partial mediation of women's attitude in the relationship between pink marketing strategies and their buying behavior, and a partial moderation of women's demographic characteristics on the relationship between their attitude and buying behavior.

Keywords

Pink marketing strategies, women's buying behavior, women's attitude, women's demographic characteristics, personal care products.

Article history

Received: 05 August 2024 · **Accepted:** 21 November 2024

1. Introduction

Despite the global increase in women's participation in the workforce, they continue to encounter (face) challenges in attaining leadership positions, particularly

1.1. Overview

Pink marketing is one of the new marketing trends that emerged in the twenty-first century. It refers to the marketing activities that target women by collecting information about their needs, psychological nature, lifestyle, and preferences to use in designing suitable marketing strategies for different products. The reason behind choosing the pink color in marketing is that women are strongly attracted to that color and prefer to find it in the products they use (Freihat et al., 2021; Hussein et al., 2024). Since women represent half of the world's population, dominate the fields of economics, and influence the buying decisions of other people, such as their family and friends, they constitute a profitable segment for different companies. Hence, marketing strategies aim to shape women's buying behavior and are concerned about the factors that affect it (Abdelamir et al., 2022; Barari et al., 2023; Chua et al., 2022; El Ganaby, 2021; Freihat et al., 2021; Hussein et al., 2024; Zidan, 2020).

As women's buying behavior is the result of a variety of factors, such as attitude, which affects their actions while buying a product, companies' understanding of this behavior enables them to design effective pink marketing strategies that influence women's emotions and their tendency to act towards pink products (Ezzat & Rady, 2021). This is because of the most significant role that the affective aspect plays in forming women's attitudes. Accordingly, if the companies intensify their pink marketing strategies that highlight women's emotions, needs, and preferences, they will attract a vital segment of the market and gain considerable profits. In accordance with the above insights, women are heavy consumers of personal care products. Collins et al. (2021) found that the average woman from different age groups, education levels, occupations, and incomes uses twelve different types of these products each day, including soaps, shampoos, hair and skincare products, cosmetics products, fragrances, deodorants, and oral care products. Hence, pink marketing strategies are easily applied to those products.

Moreover, although Egyptian women represent around half of the population (CAPMAS, 2024), the concept of pink marketing is still narrowly applied in Egypt. This motivates the researcher to study how pink marketing strategies can affect Egyptian women's buying behavior of personal care products by directing their attitude toward these products. The research is organized as follows: exploratory study, research problem, research objectives, theoretical and empirical impacts of the research, literature review, hypotheses development, research model, research methodology, results of the statistical analysis, discussion of findings, research recommendations, and finally, research limitations.

1.2. Exploratory Study

An exploratory study of six questions (Appendix A) was conducted from November to December 2023 to verify the validity of the research problem. The researcher asked 25 Egyptian women consumers of personal care products, whose demographic characteristics were as follows: their age groups ranged from under 20 to 40 years old and above. They were diversified among students, housewives, and employees in the private and public sectors. Their income levels ranged from less than or equal to 5000 L.E. to more than or equal to 15,000 L.E. per month. Regarding question 1 (How do you find using pink colors in marketing for personal care products?), 10 of 25 women (aged 25 to less than 40 years and working in the private sector with monthly income exceeding 15000 L.E.) found it an attractive and easy way to direct their attention toward personal care products and find them quickly on shelves. While the rest of the 15 women (aged 30 to 49 and working in the private and public sectors with monthly income exceeding 10000 L.E.) did not express a preference for pink colors, the products they use are different colors rather than pink ones. For example, they mentioned the brands NUXE, SKIN CODE, GARNIER, and LANCÔME that use purple, orange, and light blue.

When asking question 2 (How do you perceive the marketing activities for personal care products done by different companies?) 20 of 25 respondents (aged 20 to 39, including students and those working in the private sector with monthly income starting from 5000 L.E.) found them necessary for increasing their awareness about different brands and encouraging them to buy. Also, they added that the most commonly used marketing activities are using pink-colored packages, using phrases related to beauty, using female sales representatives, and providing offers on whole sets. The remaining five respondents felt that the marketing activities needed to be more substantial. As the researcher asked question 3 (Which is preferable for you: dealing with female sales representatives or males, and why?), 21 of 25 women (aged 20s and late 30s) preferred dealing with female sales representatives because they felt more comfortable with them. The remaining four women (aged over 40 years old) preferred males, as they were more able to convince them than their female counterparts.

The responses to question 4 (How often do you buy personal care products directed to you?) showed that 15 of 25 women (aged above 30 years old and working in the public sector with a monthly income starting at 15000 L.E.) buy monthly, while 4 (aged in their early 20s and students) buy every week. However, the remaining six women (aged over 40 years old and working in the public sector with a monthly income starting at 10,000 L.E.) wait for sales offers to buy in bulk. The responses to question 5 (How do you feel when buying pink personal care products?) demonstrated that all 25 (with different demographic characteristics) women found that those products fulfill their needs of being beautiful and happy. Finally, the researcher concluded from the women's answers to question 6 (If your friends ask for your advice when buying pink personal care products, what will be your answer?) that 19 out of 25 respondents (aged 20 to 49 including students and those working in the private sector with monthly income starting at 5000 L.E.) will advise their friends to buy those products, especially

during sales. In contrast, the remaining six women (aged late 30s and working in the public sector) were neutral regarding the advice.

1.3. Research Problem

Pink marketing is one of the new terminologies that emerged in the 21st century, especially after understanding the importance of the role that women's buying behavior plays in marketing (Changda & Bhaumik, 2023; Ezzat & Rady, 2021). However, there is insufficient literature on pink marketing, and while there is considerable existing knowledge about it, this review does not adequately cover it. The link between pink marketing, women's attitudes, and buying behavior requires further research to be fully supported. Also, past studies, such as Zidan (2020), Abdelamir et al. (2022), Freihat et al. (2021), and Barari et al. (2023), showed that the concept of pink marketing is still narrowly applied in Egypt, which makes women's attitudes and buying behaviors unclear and less directed toward pink products. This creates the need for more research to determine the elements of pink marketing and their effect on women's buying behavior. This research will attempt to fill the gap in the field of pink marketing by examining how pink marketing strategies can affect Egyptian women's buying behavior of pink products, influencing their perception of these products. Hence, this research is conducted to answer the following questions:

RQ₁: Is there a positive relationship between pink marketing strategies and women's buying behavior?

RQ₂: Does women's attitude have a positive mediating role in the relationship between pink marketing strategies and women's buying behavior?

RQ₃: Do women's demographic characteristics (age, education, occupation, income) have a positive moderating role on the relationship between their attitude and buying behavior?

1.4. Research Objectives

This research is conducted to achieve the following objectives:

- To examine the relationship between pink marketing strategies and women's buying behavior.
- To study the mediating role of women's attitude in the relationship between pink marketing strategies and women's buying behavior.
- To pinpoint the moderating role of women's demographic characteristics (age, education, occupation, income) on the relationship between their attitude and buying behavior.

1.5. Theoretical Impacts

This research contributes to the literature by providing a model that highlights the effect of pink marketing strategies on Egyptian women's buying behavior for personal care products, influencing their attitude toward these products. This is because, to the best of the researcher's knowledge, the Egyptian studies proposed in this field are still limited.

1.6. Empirical Impacts

In Egypt, women represent around half of the population (CAPMAS, 2024), which means that they are considered a profitable segment for the companies of personal care products, especially since their attitude is easily shaped through the emotional attachments they find in those products. This leads to an increase in their purchases. Accordingly, the results of this research provide a guide for personal care products companies to intensify their pink marketing strategies, which highlight women's lifestyle and needs, and direct their buying behavior toward those products, thereby helping the companies achieve higher levels of profits.

2. Literature Review and Hypotheses Development

This section covers some of the past studies that discuss pink marketing, women's buying behavior, women's attitude, the relationship between pink marketing strategies and women's buying behavior, the relationship between pink marketing strategies and women's attitude, and the relationship between women's attitude and women's buying behavior.

2.1. Pink Marketing

Pink marketing is a new terminology that recently emerged from the idea of using the color pink to promote goods to women and young girls as a symbol of romance and feminism. Pink is a crucial element in branding and differentiating various products in competitive markets. It draws women's opinions about distinguishing between numerous brands. This is because women's preferences for a specific color are determined by their emotional reactions to a color-related object. They favor colors that are directly related to the objects they like and take them into account as one of the first major factors that affect their buying decisions (Changda & Bhaumik, 2023). Also, the pink color is associated with women to the extent that they prefer it in all products. It is described as a global language to attract women through the suggested term of "Pink Globalization". Accordingly, the researchers introduced several definitions of pink marketing that firms use to target women and affect their buying behavior, as noted by Ezzat and Rady (2021) and Freihat et al. (2021). Pink marketing is the application of marketing strategies (product, price, place, promotion) in dealing with women, whether as marketers or consumers, to meet their needs and preferences.

Additionally, Chua et al. (2022) described pink marketing as a strategy that targets women and uses techniques that are more appealing to women since their

psychological nature differs from men. Barari et al. (2023) confirmed this by emphasizing the importance of collecting information that aligns with women's attitudes and tastes to influence their buying behavior. Moreover, pink marketing is important because women make up half of the world's population and account for about 85% of overall consumer spending. Furthermore, they play a significant role in economics, marketing, and various aspects of daily life (Abdelamir et al., 2022; Barari et al., 2023; Freihat et al., 2021; Zidan, 2020). From the previous discussion, the researcher adapted the following definition of pink marketing: it is the application of marketing strategies (product, price, place, promotion) on women in a way that affects their emotions, matches their lifestyle and needs, and shapes their buying behavior.

Personal care products include hair care, skin care, sun care, bath and shower products, oral care, deodorants, perfumes, and antiperspirants, men's grooming products, baby care products, and cosmetic products (facial make-up products, eye make-up products, lip and nail make-up products, and hair styling and coloring products). Thorstensson and Ydreborg (2024) pointed out that the personal care industry incorporates skincare, hair care, make-up, and fragrances. The skincare products have 41% of the market share, followed by haircare products (22%), and make-up products (16%). In 2022, the global personal care market was valued at over \$500 billion. Projections indicate that by 2026, the market is expected to expand to \$600 billion in value. In Indonesia, the personal care industry is divided into skin care, cosmetics, and fragrances, achieving a total revenue of \$3.2 billion in 2021 and predicted to increase by 9% in 2026. The leading players in this industry are Paragon Technology (PT), which serves Indonesia's middle class, L'Oréal, which targets mid-and upper-income consumers, Mandom Corp. (a joint venture of Japanese and Indonesian cosmetics manufacturers that targets customers with smaller incomes for global and domestic markets), Oriflame Cosmetics, Viva Cosmetics Ltd., PT Rembaka, PT Kimia Farma, PT Kosmetikatama Super Indah, Marta Tilaar Group, and Tempo Scan Group (Sudibyo & Boros, 2024).

Confetto et al. (2023) studied Dove and L'Oréal as two of the famous personal care brands. They mentioned that women around the world spend over \$330 billion a year on fragrances and cosmetics. Dove was founded in the United States and is owned by Unilever Group. It is considered not only one of the 50 strongest personal care brands in the world in terms of financial performance but also one of the 30 most meaningful brands globally that contribute most to the well-being of individuals, communities, and the environment. L'Oréal is a French company founded in 1909 by Eugène Schueller. It provides hair colors, beauty products, and cosmetics. L'Oréal is considered one of the world's largest manufacturers of beauty products and cosmetics, with well-known brands such as Maybelline, Lancôme, and Kiehl's. It is also recognized as one of the top 100 most reputable companies for its long-standing reputation and contribution to the well-being of its employees and the communities.

When looking to Egypt, personal care products are offered by different companies such as Marico Ltd., Procter & Gamble Company, Unilever PLC, Henkel PDC Egypt SAE, L'Oréal Group, Avon Inc., Kao Corporation, Oriflame Cosmetics S.A., Revlon Inc., Labello, Eva Cosmetics, Garnier, Nefertari, Areej Aromatherapy, Sunsilk, Nivea,

and Estee Lauder Companies Inc. Personal care products are available in specialty stores, cosmetic stores, pharmacies, large and small retail stores, hypermarkets and supermarkets, and e-commerce platforms (Caioni et al., 2023; Rodriguez, 2022). In Egypt, women who are in urban areas like Cairo and Giza governorates prefer to buy personal care products from major global and local brands because they are emotionally attached to them and find them self-expressive. However, women are not homogeneous due to the differences in demographic characteristics such as age, education, occupation, and income. Accordingly, some of them search for pink products that are mainly directed at them, while others who are price sensitive prioritize the prices of the products (Boseila et al., 2023). Consequently, some personal care products' companies, such as SunSilk, Eva, and Nivea, provide small sachets at reasonable prices to help women consumers who are price sensitive in fulfilling their needs and reducing their dissonance at the same time.

2.2. Women's Buying Behavior

Consumers' buying behavior is their behavior concerning what products or services they buy, how they buy them, how they use them, how they weed out of them, and why they buy them. Buying behavior is the process by which consumers choose, acquire, and use products to fulfill their needs. There are a variety of mechanisms involved in the behavior of consumers in terms of their decision-making process, shopping habits, the brands they buy, and the stores they visit. They also involve learning how consumers act and react when they need a product and how they decide to buy it. Buying behavior also includes consumers' emotional, mental, and behavioral responses, reactions, and activities (Agrawal et al., 2024; Alkhizar & Vidani, 2023; Jaiwant, 2023). Odiye et al. (2024) clarified that consumer buying behavior is the activities associated with the buying process and the use of goods and services. It is a series of choices made by a consumer prior to making a purchase that begins once the customer has established a willingness to buy. Buying Behavior concerns how the consumer's emotions, attitudes, and preferences affect their buying behavior, on one side, and how consumers decide to spend their various resources to meet their needs and requirements, on the other side.

Consumer buying behavior is determined by the degree of involvement that a consumer shows in a buying decision, as it allows consumers to ensure that this product is precisely what they want or do not want. The amount of risk also determines the type of buying behavior (complex, dissonance-reducing, variety seeking, habitual); the higher the price of the product, the higher the risk, and the higher the degree of consumers' involvement. The buying behavior process has six stages: problem recognition, information search, evaluation of alternatives, purchase decision, purchase, and post-purchase evaluation. Due to the context of this research, types of buying behavior and the six stages of the buying process are not discussed. Alkhizar and Vidani (2023) and Agrawal et al. (2024) explained the various factors that influence consumer buying behavior, both internal and external to the consumer. The internal factors include perceptions, motivation, lifestyle, personal characteristics (i.e.,

age, occupation, income), and attitudes. External factors include advertising techniques, societal norms, family, reference groups, culture, technology, legal aspects, economic status, branding, price, quality, and attributes of the products. For example, cultural factors have a significant influence on consumers' buying behavior, as individuals grow up with certain values and insights that shape their ways of behaving.

Among the theories that explain consumer buying behavior are economic theory, cognitive theory, and the Theory of Planned Behavior (TPB). The economic theory assumes that consumers buy products based on rational thinking, and this theory became the basis for subsequent consumer behavior studies. It asserts that whenever consumers plan to buy a product, they evaluate the product's benefits and costs before making a purchase. The cognitive theory states that consumers first seek information about the product, then analyze it to decide whether to buy it. The theory of planned behavior consists of three psychological domains: attitude, subjective norm, and perceived behavioral control. Attitude is a person's feeling of favorableness towards a specific behavior. The subjective norm is the perception of other people that influences consumers' decision-making. Perceived behavioral control is a consumer's ability and opportunity to engage in a particular behavior (Agrawal et al., 2024; Baluku, 2024; Fauzi et al., 2024; Jaiwant, 2023; Khan et al., 2023; Tiwari et al., 2024).

This research is focused on the consumer's attitude as one of the dimensions of TBP and relates it to women. Accordingly, women's buying behavior is the sum of actions they take before making a buying decision. These actions include searching for goods and services, comparing alternatives, consuming the chosen products, and evaluating them. When studying the factors that affect consumer buying behavior, Freihat (2021), El-Kady (2022), and Rehman and Zeb (2022) found that all psychological factors, demographic factors, social factors, and cultural factors play the most effective role in consumer buying behavior. Zidan (2020), Rodriguez (2022), Marina et al. (2023), Nofal and Mohamed (2023), and Hussien et al. (2024) found that women's buying behavior is affected by their personal beliefs, attitudes, perceptions, emotions, opinions of friends, interaction with sales representatives, and reviews of consumer groups. From the previous discussion, the researcher adapted the following operational definition of women's buying behavior: it is the activities and actions that women take while searching for personal care products that satisfy their needs, and before making a buying decision.

2.3. Women's Attitude

According to the theory of Planned Behavior, attitude is defined as the evaluation of a consumer regarding the purchase of a product. It is shaped by different factors, including cognitive evaluation (thought process), beliefs and values, and emotional attachment towards any object (Khan et al., 2023). Caso et al. (2024) added that attitude is the overall favorable or unfavorable evaluation of the behavior, including both cognitive and affective components and subjective norms, which can be split into injunctive (perceived social pressure to behave or not), descriptive (perception of what other people do regarding the behavior norms), and perceived behavioral control (the

perception of being capable of performing and in control of the behavior). Abudalfa et al. (2024) defined consumers' attitudes as their impressions toward a specific object. These impressions can have an impact on a consumer's buying behavior, loyalty, and level of satisfaction with the good or service. Companies need to understand their consumers' attitudes to identify areas for improvement and address any unfavorable opinions that consumers may have about their brand.

Accordingly, women's attitude is defined as their favorable or unfavorable view of a particular behavior, and it is formed from their moods, feelings, perceptions, and brand awareness. It has three main aspects, which are cognitive, affective, and conative. Cognitive aspect (think) includes the thought or evaluation process that takes place in a woman's mind. Affective aspect (feel) includes beliefs, values, and emotional attachment toward any object. Conative aspect (act) includes a woman engaging in a certain behavior (Gârdan et al., 2023; Hadi et al., 2023; Hameed et al., 2023; Jahromi et al., 2023; Khan et al., 2023; Marina et al., 2023; Siddiqui et al., 2023; Zaman et al., 2022). Based on the previous discussion, the researcher derived the following operational definition of women's attitude: it is an evaluation of women's emotional feelings and their tendency to act towards pink marketing strategies.

2.4. The Relationship between Pink Marketing Strategies and Women's Buying Behavior

As concluded from the previous studies, such as Ezzat and Rady (2021), Freihat et al. (2021), Changda and Bhaumik (2023), and Jadhav et al. (2023), pink marketing strategies that companies use to affect women's buying behavior are product, price, place, and promotion. Pink products are the sum of goods and services that match women's needs and preferences. The goal is to increase the degree of compatibility between the pink product itself and the characteristics of women and their expectations. Women are emotionally attached to the product's details that relate to their taste and affection, so they are interested in intangible characteristics that affect their emotional well-being. That is why they are concerned about personal care products that make them more beautiful and attractive (Abdelamir et al., 2022; Ezzat & Rady, 2021).

Pink price is the amount that women pay for the product directed to them, and it is one of the criteria for the product's selection. On one hand, some women are willing to pay more to receive a higher quality of the product. On the other hand, others are price sensitive, which requires firms to use pink pricing methods, such as setting reduced prices and presenting discounts for women's personal care products (Dertas, 2021; Ezzat & Rady, 2021). Pink place is the location where the product is offered to women, considering their preferences in terms of color, form, and both external and internal design, as well as the general store surroundings. While men are more concerned with the physical aspects of the store (parking areas, ease of use, and distribution outlet proximity), women are more concerned with its emotional aspects (color, design, aroma) (Abdelamir et al., 2022; Ezzat & Rady, 2021).

Pink promotion represents the use of different tools to communicate with women without utilizing their trends and weaknesses. Since women are concerned with

emotions, communication should focus on emotional aspects in the promotional activities more than logical information. In advertising, for instance, it should focus on feelings, harmony, celebrities' endorsements, music, and warm colors such as pink and red. Regarding sales promotion, it is better to include free samples and price discounts that encourage women to buy more of the products. Moreover, personal sellers who have persuasive skills have a vital role in affecting women's buying behavior. Also, public relations, which keeps the company in touch with women through annual reports, charitable activities, and exhibitions, is capable of directing women's buying behavior toward its products (Ezzat & Rady, 2021; Freihat, 2021).

Additionally, Rodriguez (2022), Ahmed et al. (2023), Changda and Bhaumik (2023), Jadhav et al. (2023), and Rizvi et al. (2023) mentioned that women's buying behavior is affected by trust, price, quality, brand image, availability of the product, and promotions. Women need to trust the brand before making a purchase decision. Pink price can make comparisons easy and motivate women to buy, so women are likely to look for the best deals before making a purchase. Brands with a good name and reputation do better with women. Regarding product availability, women need to know that the product they want is available before making a purchase; otherwise, they will lose interest and search for other alternatives. Also, promotions can encourage women to make a purchase. Based on those factors, women form their decisions about which brand to buy based on their experiences with competing options. Even when women's purchase selections have already been impacted by their research and consideration, marketers can still have an impact on them. At this stage, businesses use pink marketing to provide women with what they want and make it simple for them to buy their products. Based on the previous discussion, the researcher derived the following hypothesis:

H₁: There is a positive relationship between pink marketing strategies and women's buying behavior

2.5. The Relationship between Pink Marketing Strategies and Women's Attitude

Alali et al. (2023) and Zarei and Kharajo (2023) mentioned that the four Ps of marketing, which are product, price, place, and promotion, positively affect women's attitudes. Hence, the firms need to provide customized marketing strategies that target women's emotions, preferences, and lifestyles to stimulate their positive attitude toward the products. When designing the products, they should be compatible with women's personalities and beliefs. Price strategies should include price discounts and other sales promotion activities to convince price-sensitive women who make many price evaluations before taking their buying decisions. The place or distribution of the products should be easily accessible for women to consider when making their shopping lists. Also, promotion strategies should use messages, pink colors, music, and celebrities that are emotionally attached to women. Steind (2023), Ikhlaq et al. (2024), and Thorstensson and Ydreborg (2024) added that elements such as the size of the product, its shape, its scent, the language written on its package, and the brand logo shape women's attitude by capturing their attention, communicating their knowledge,

and arousing their emotions toward products with feminine attributes, which in turn develop a favorable attitude towards the products and improve women-brand relationships. Hence, Pookulangara and Bharath (2022) pointed out that even if women do not have any experience with a particular product, their attitude can be formed using the knowledge and information they get about that product provided by different pink marketing strategies.

Moreover, Jadhav et al. (2023) added that the packaging of pink products attracts women. Packaging is the first thing women notice before making a purchase. The design of packaging should attract the attention of women by using pink colors and words that stimulate their emotions. Additionally, Rodriguez (2022) discussed the role of color psychology in shaping women's buying behavior, as they are attracted to color and tend to feel the emotions tied to it. This is because women's perception of color affects their cognitive feelings, which results in deciding what product they want to buy and what brand they will stay loyal to. Using pink colors in marketing can result in stimulating positive emotions in women and give them a reason to purchase that product. Moreover, when women think of a product, they begin associating it with a color and emotion, as this makes it easier for them to identify and recognize that product and purchase it. Based on the previous discussion, the researcher derived the following hypothesis:

H₂: There is a positive relationship between pink marketing strategies and women's attitudes.

2.6. The Relationship between Women's Attitude and Women's Buying Behavior

Zhang et al. (2022) clarified that attitude (cognitive and affective aspects) has a significant effect on women's buying behavior by shaping their habits, behavioral intentions, and favorable opinions about the products that are directed to them, and influences their buying behavior of those products. Accordingly, Hameed et al. (2023) mentioned that women's attitude toward personal care products is a useful predictor of their buying behavior, which may change because of the information provided to them through different pink marketing strategies. Additionally, Ezzat and Rady (2021), Dertas (2021), Changda and Bhaumik (2023), Gârdan et al. (2023), Hadi et al. (2023), Jadhav et al. (2023), and Rizvi et al. (2023) agreed that consumers' demographic characteristics, including age, occupation, income, education, and gender, have a strong influence on their attitude and buying behavior as well.

Gârdan et al. (2023), Hadi et al. (2023), Jadhav et al. (2023), and Rizvi et al. (2023) clarified that women's age and education influence their buying behavior. This is because young and highly educated women are more aware of a product's attributes and benefits and show more interest in buying it than their older, less educated counterparts. Moreover, as concluded by Gârdan et al. (2023) and Rizvi et al. (2023), women's occupation and income shape their buying behavior of personal care products, as the higher their working positions and income levels, the more they are attracted to high-end pink products. Also, Ezzat and Rady (2021), Changda and Bhaumik (2023), and Hadi et al. (2023) proved that women's attitudes are easily shaped through different

marketing strategies, especially when they are targeted and express their feelings. Hence, they buy more of those products (Dertas, 2021). Based on the previous discussion, the researcher derived the following hypotheses:

H₃: There is a positive relationship between women's attitude and their buying behavior.

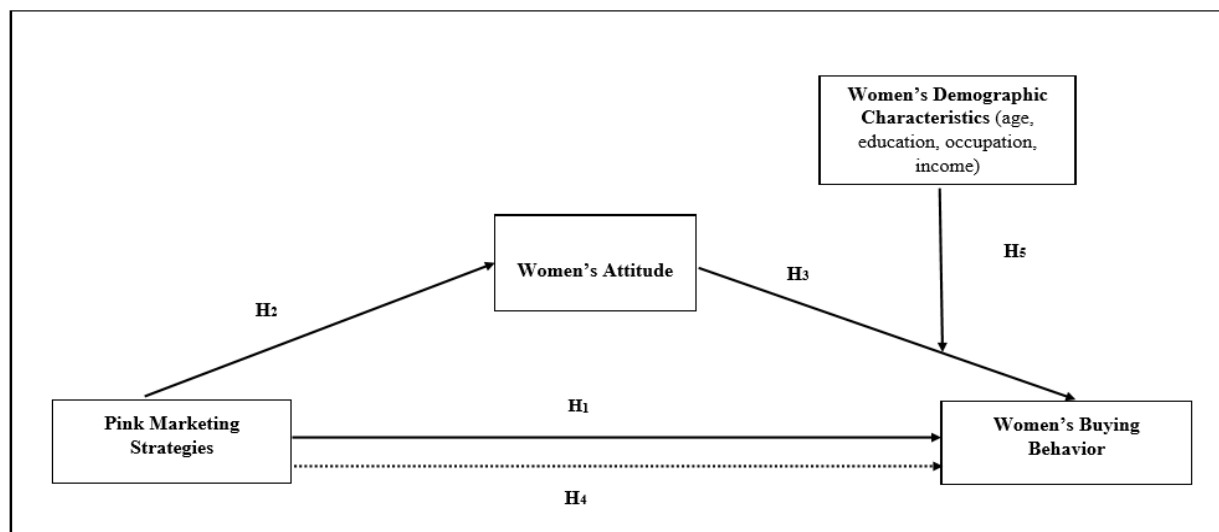
H₄: Women's attitude has a positive mediating role in the relationship between pink marketing strategies and women's buying behavior.

H₅: Women's demographic characteristics (age, education, occupation, and income) have a positive moderating role on the relationship between their attitude and buying behavior.

2.7. Research Model

The following figure (1) represents the research model:

Figure1 *Research Model*



3. Research Methodology

The research methodology includes research population and sampling, measurements and scaling of research variables, and statistical analysis.

3.1. Research Design

According to Creswell (2014), Sekaran and Bougie (2016), Dehalwar (2024), and Verma et al. (2024), the researcher used a conclusive research approach, starting with a descriptive study of the variables. Then, causal research was used to study the relationship between them by testing the hypotheses. Data was collected using a quantitative approach by providing an online questionnaire designed by Google Forms and shared with various social media accounts and groups. Regarding the time horizon, a multiple cross-sectional design was followed for collecting the data from multiple groups at a single point in time over 5 months. The collecting process took place from

January 2024 to May 2024, where the researcher was following up on the number of responses until they reached a reliable sample size.

3.2. Research Population

The research population comprised all women located in different districts of Egypt, estimated at 51,472,894 based on the governorates (CAPMAS, 2024). However, this number includes children and other groups, so the actual number of women relevant to this research may be lower.

3.3. Research Sampling

Regarding the sample size, under the assumption of a normal distribution of population characteristics, the researcher used a margin of error of 5.5%, resulting in a sample size of 307 observations. As the researcher could not access the mean and variance of all female consumers geographically dispersed in different districts of Egypt, a non-probability convenience sample was used. The online questionnaire was shared with different accounts and groups on social media webpages that were convenient to both the researcher and the respondents in terms of time, effort, cost, and place. The sample frame includes women aged between 20 and 40 years old who buy personal care products and are in different districts of Egypt during the study period.

3.4. Measurements and Scaling of Research Variables

Table 1 shows the measurements and scaling of the research variables from which the questionnaire was designed. From the table, the questionnaire design (Appendix B) is divided into three questions; the first question is a dichotomous one to differentiate between women who buy pink personal care products and those who do not. The second question is designed to help the respondents easily identify pink personal products by choosing the types they buy. The third question is designed to determine the respondents' level of agreement on different statements that measure the research variables using a 5-point Likert scale from strongly agree to strongly disagree. Questions four to seven are designed to measure respondents' demographic characteristics.

Table 1 *Measurements and Scaling for Research Variables*

| Variable | Measurement | Statements | Source |
|---|--|---|-------------------------|
| Independent Variable: pink marketing strategies | Pink product: 4 statements of a 5-point Likert scale are used to measure the personal care products that are directed to women. | 1. Personal care products have bright colors like pink and red | Abdelamir et al (2022) |
| | | 2. Pink personal care products have attractive designs | Zidan (2020) |
| | | 3. Pink personal care products fulfil my preferences and needs | Abdelamir et al. (2022) |
| | | 4. Pink Personal care products encourage me to try them | Zidan (2020) |
| | | 5. Pink personal care products have reasonable prices | Abdelamir et al. (2022) |
| | Pink price: 5 statements of a 5-point Likert scale (are used to measure the price of personal care products directed to women | 6. I usually compare prices before and after buying pink personal care products | Zidan (2020) |
| | | 7. I care about price when buying pink personal care products | Chua et al (2022) |
| | | 8. The price of pink personal care products is attracting me to buy | Zidan (2020) |
| | | 9. I usually buy the pink personal care products even though they are at a high price | Chua et al (2022) |
| | | 10. I can easily find pink personal care products in different stores | Zidan (2020) |
| | Pink place: 3 statements of a 5-point Likert scale are used to measure the place that provides personal care products directed to women | 11. Most of the stores' sales representatives are females. | Abdelamir et al. (2022) |
| | | 12. I find the physical surroundings of the store (i.e., design, colors, decorations) convenient. | |
| | | 13. Promotion of pink personal care products includes messages of keeping me beautiful all the time | Abdelamir et al. (2022) |
| | Pink promotion: 5 statements of a 5-point Likert scale are used to measure the promotional activities of personal care products directed to women | 14. Using celebrities in promotional activities of personal care products encourages me to buy | Zidan (2020) |
| | | 15. Promotional activities of pink personal care products match my preferences | |
| | | 16. Sales promotion (i.e., buy one get one free, extra amount for free) of pink personal care products encourages me to buy | Abdelamir et al (2022) |
| | | 17. I am usually attracted to catalogues of pink personal care products | Zidan (2020) |

Table 1 *Measurements and Scaling for Research Variables (Cont'd)*

| Variable | Measurement | Statements | | Source |
|---|--|---|---------------------|-----------------------------|
| Dependent Variable: women' s Buying Behavior | 5 statements of a 5-point Likert scale are used to measure personality traits, subjective norm (an individual's perception of how other people expect him to behave), affordability, and availability to buy the product | 18. I prefer to buy personal care products directed to me | | El-Kady (2022) |
| | | 19. I am interested in buying pink personal care products | | Jadhav, et al (2023) |
| | | 20. I can afford to buy pink personal care products | | Rehman & Zeb (2022) |
| | | 21. I usually buy pink personal care products with my friends | | Marina et al. (2023) |
| | | 22. The availability of pink personal care products encourages me to buy more | | Jadhav et al. (2023) |
| | | | | |
| Mediating Variable: women' s attitude | 2 statements of a 5-point Likert scale are used to measure the cognitive dimension, two statements are used to measure the affective dimension, and two statements are used to measure the conative dimension. | 23. I think pink personal care products are reliable | | Hadi et al. (2023) |
| | | 24. I find pink personal care products are valuable | | Hadi et al. (2023) |
| | | 25. Buying pink personal care products is a good idea | | Pookulangara et al. (2023); |
| | | 26. I like buying pink personal care products | | Singh et al. (2021) |
| | | 27. I will continue to buy pink personal care products | | Gârdan et al. (2023) |
| | | 28. I will recommend pink personal care products to other women | | Zhang et al. (2023) |
| Moderating Variables: Women' s demographic characteristics | Ratio scale is used to measure age groups. | Less than 20 years old | 20-30 years old | Al-Maliki et al. (2022) |
| | | 30-40 years old | 40 and above | Elkady (2022) |
| | An ordinal scale is used to measure the education level. | High school | Bachelor degree | Ettinger et al. (2022) |
| | | Postgraduate (Master, PHD) | Others | Corrochano et al. (2022) |
| | A nominal scale is used to measure occupation. | Private sector | Public sector | Czarniecka-Skubina (2022) |
| | | Student | Not working | Sapiains et al. (2022) |
| | Ratio scale is used to measure income level. | Less than 5000 L.E. | 5000-10000 L.E. | Gârdan et al. (2023) |
| | | 10000-15000 L.E. | 15000 L.E. and more | |

3.5. Pretest

The questionnaire was first distributed to 25 women who buy personal care products, showed their interest in the topic of pink marketing, and were enthusiastic to fill in the questions. The respondents found the questions clear and consistent with the time they spent answering them, which did not exceed 10 minutes.

4. Results of Statistical Analysis

This section includes the results of descriptive statistics for the research variables, reliability and validity tests, normality tests, correlation tests, and testing hypotheses through structural equation modeling (SEM).

4.1. Descriptive Statistics

This section illustrates the descriptive statistics of both the respondents' demographic characteristics and an analysis of each statement headed by a variable in terms of mean, minimum, maximum, and standard deviation. The primary data for this research was collected via a self-completed questionnaire. The researcher used an error of 5.5% (considering incomplete data and inconsistent responses); 296 of 307 women responded to the questionnaire, achieving a response rate of 96.4% (296/307). Table 2 illustrates the demographic characteristics of questionnaire respondents in terms of frequency and percentage. That table shows that 72.6% are aged between 20 and 30 years old. When looking at education level, 37.8% of the respondents had a high school education. Regarding occupation, 44.6% of the respondents are still students. Finally, 51.4% of the respondents gain a monthly income ranging from 5000 to 10000 LE.

Table 2 Descriptive Statistics

| Variable | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Age | | |
| less than 20 years old | 17 | 5.7% |
| from 20 to less than 30 years old | 215 | 72.6% |
| from 30 to less than 40 years old | 23 | 7.8% |
| 40 years and above | 41 | 13.9% |
| Educational Level | | |
| high school | 112 | 37.8% |
| bachelor's degree | 92 | 31.1% |
| postgraduate | 56 | 18.9% |
| others | 36 | 12.2% |
| Occupation | | |
| not working | 34 | 11.5% |
| student | 132 | 44.6% |
| public sector | 36 | 12.2% |
| private sector | 94 | 31.8% |
| Monthly Income | | |
| less than EGP 5000 | 89 | 30.1% |
| from EGP 5000 to EGP 10000 | 152 | 51.4% |
| from EGP 10001 to EGP 15000 | 28 | 9.5% |
| more than EGP 15000 | 27 | 9.1% |
| N | 296 | |

Table 3 illustrates detailed descriptive statistics for each statement of pink marketing strategies (pink product, pink price, pink place, and pink promotion), women's buying behavior, and women's attitude. They include the minimum, maximum, mean, standard deviation, and variance for each statement. The table shows that the respondents tend to agree with the statements measuring each of pink products, pink place, pink promotion, women's buying behavior, and women's attitude, as the

mean value ranges from 3.5 to 4.5. In comparison, the respondents tend to be neutral about the statements measuring the pink price, as the mean value ranges from 2.5 to 3.5.

Table 3 Descriptive Statistics of Variables' Measures

| statement | Minimum | Maximum | Mean | Standard Deviation | Variance |
|--|-------------|------------|--------------|--------------------|---------------|
| Pink Product | 1.5 | 5 | 4.009 | 0.7766 | 0.6031 |
| Personal care products have bright colors like pink and red | 2 | 5 | 4.090 | 0.8880 | 0.7885 |
| Pink personal care products have attractive designs | 1 | 5 | 4.100 | 0.8960 | 0.8028 |
| Pink personal care products match my preferences and needs | 1 | 5 | 3.980 | 1.0360 | 1.0733 |
| Pink personal care products encourage me to try them | 1 | 5 | 3.860 | 1.0970 | 1.2034 |
| Pink Price | 1.8 | 4.8 | 3.117 | 0.6195 | 0.3838 |
| I find the prices of pink personal care products are reasonable | 1 | 5 | 3.150 | 1.1270 | 1.2701 |
| I usually compare prices before and after buying pink personal care products | 1 | 5 | 3.200 | 1.1580 | 1.3410 |
| I care about the prices when buying pink personal care products | 1 | 5 | 3.270 | 1.1730 | 1.3759 |
| Prices of pink personal care products are motivating me to buy | 1 | 5 | 3.150 | 0.9030 | 0.8154 |
| I usually buy the pink personal care products even they are of a high price | 1 | 5 | 2.820 | 1.1480 | 1.3179 |
| Pink Place | 2.67 | 5 | 3.617 | 0.4877 | 0.2379 |
| I can easily find pink personal care products in different stores | 2 | 5 | 3.920 | 0.8220 | 0.6757 |
| Most of the stores' sales representatives are women | 1 | 5 | 3.470 | 1.0180 | 1.0363 |
| I find the physical surroundings of the store (i.e. design, colors, decorations) are convenience | 2 | 5 | 3.460 | 0.6470 | 0.4186 |
| Pink Promotion | 2.4 | 5 | 3.683 | 0.6556 | 0.4298 |
| Promotion of pink personal care products includes messages of keeping me beautiful all the time | 1 | 5 | 3.790 | 0.9520 | 0.9063 |
| Using celebrities in promotional activities of pink personal care products encourages me to buy | 1 | 5 | 3.270 | 1.1410 | 1.3019 |
| Promotional activities of pink personal care products match my preferences | 1 | 5 | 3.510 | 0.8150 | 0.6642 |
| Sales promotion (i.e. buy one get one free, extra amount for free, coupons) of pink personal care products encourage me to buy | 1 | 5 | 4.020 | 1.1180 | 1.2499 |
| I usually attracted to catalogs of pink personal care products | 1 | 5 | 3.820 | 0.9830 | 0.9663 |
| Women Buying Behavior | 2 | 5 | 3.583 | 0.6819 | 0.4650 |
| I prefer to buy personal care products directed to me | 2 | 5 | 4.060 | 0.7920 | 0.6273 |
| I'm interested in buying pink personal care products | 1 | 5 | 3.790 | 1.0560 | 1.1151 |

Table 4 Descriptive Statistics of Variables' Measures (cont'd)

| statement | Minimum | Maximum | Mean | Standard deviation | variance |
|--|---------|---------|-------|--------------------|----------|
| I can afford to buy pink personal care products | 1 | 5 | 3.810 | 1.0040 | 1.0080 |
| I usually buy pink personal care products with my friends | 1 | 5 | 2.840 | 1.1770 | 1.3853 |
| The availability of pink personal care products motivates me to buy more | 1 | 5 | 3.410 | 1.0730 | 1.1513 |
| Women Attitude | 1.5 | 5 | 3.639 | 0.7435 | 0.5528 |
| I think pink personal care products are reliable | 1 | 5 | 3.500 | 0.8230 | 0.6773 |
| I find pink personal care products are valuable | 1 | 5 | 3.390 | 0.8830 | 0.7797 |
| Buying pink personal care products is a good idea | 1 | 5 | 3.610 | 0.8950 | 0.8010 |
| I like buying pink personal care products | 1 | 5 | 3.870 | 1.0910 | 1.1903 |
| I will continue to buy pink personal care products | 1 | 5 | 3.899 | 1.0333 | 1.0677 |
| I will recommend pink personal care products to other women | 1 | 5 | 3.560 | 0.9550 | 0.9120 |

4.2. Reliability and Validity Analysis

To test the reliability and validity of the variables' measures, three indicators (pink marketing strategies, women's buying behavior, and women's attitude) are created to combine a group of related statements (or factors) into one indicator. These indicators are composed by using the equal weights method. Each indicator is calculated by adding the scores of statements that are related to this indicator, and then the sum is divided by the number of related statements. Table 4 shows the values of Cronbach's alpha, which reflect the good reliability of the research statements, as they range from 0.710 to 0.873 for the constructs. Also, the composite reliability varies from 0.512 to 0.678, which is above the preferred value of 0.50, indicating that the model is internally consistent. Furthermore, the results of confirmatory factor analysis (CFA) show that all items are loaded in their constructs as suggested in the proposed research model, as the loadings of all items are greater than 0.50.

Moreover, the Average Variance Extracted (AVE) and Kaiser-Meyer-Olkin (KMO) are used to check the reliability and validity of the analysis. Where AVE is a measure for change captured by a specific construct relative to the amount of change due to measurement error, while KMO is a measure of how suitable the data is for factor analysis, it measures sampling adequacy for each variable and the complete model (Abdelaal & Abdelaleem, 2018; Amer, 2018; Dehalwar, 2024; Nguyen et al., 2019). The table shows that the values of AVE are above the recommended rate of 0.50, which indicates that the constructs could explain more than 50% of the statements and so reflect a high internal validity. Also, the adequacy of the sample was proved by the values of the KMO test, which measures the suitability of the data for factor analysis, being greater than 0.5.

Table 5 Reliability and Validity Tests for the Variables' Measures

| Constructs | Number of Statements | Cronbach's Alpha | Composite Reliability | KMO | Bartlett's Test | AVE | Item | Loading |
|------------------------------------|----------------------|------------------|-----------------------|-------|---------------------|-------|--------------|---------|
| Pink Marketing Strategies | 17 | 0.804 | 0.594 | 0.587 | 2542.199 (0.000) | 0.771 | P-Product1 | 0.823 |
| | | | | | | | P-Product2 | 0.582 |
| | | | | | | | P-Product3 | 0.633 |
| | | | | | | | P-Product4 | 0.780 |
| | | | | | | | P-Price1 | 0.515 |
| | | | | | | | P-Price2 | 0.502 |
| | | | | | | | P-Price3 | 0.596 |
| | | | | | | | P-Price4 | 0.564 |
| | | | | | | | P-Price5 | 0.569 |
| | | | | | | | P-Place1 | 0.594 |
| | | | | | | | P-Place2 | 0.519 |
| | | | | | | | P-Place3 | 0.555 |
| | | | | | | | P-Promotion1 | 0.720 |
| | | | | | | | P-Promotion2 | 0.599 |
| | | | | | | | P-Promotion3 | 0.535 |
| Women Buying Behavior (WBB) | 5 | 0.781 | 0.603 | 0.661 | 356.216 (0.000) | 0.701 | WBB1 | 0.618 |
| | | | | | | | WBB2 | 0.808 |
| | | | | | | | WBB3 | 0.819 |
| | | | | | | | WBB4 | 0.528 |
| | | | | | | | WBB5 | 0.724 |
| Women Attitude (WA) | 6 | 0.873 | 0.533 | 0.670 | 1277.541 (0.000) | 0.668 | WA1 | 0.722 |
| | | | | | | | WA2 | 0.800 |
| | | | | | | | WA3 | 0.883 |
| | | | | | | | WA4 | 0.811 |
| | | | | | | | WA5 | 0.759 |
| | | | | | | | WA6 | 0.731 |

4.3. Normality Test of the Research Variables

Among the different methods used to test the normality of the variables, the researcher used the Shapiro-Wilk test and the Kolmogorov-Smirnov test to give more objective results. The Shapiro-Wilk test assesses whether a sample is likely to originate from a normal distribution. In contrast, the Kolmogorov-Smirnov test compares the empirical cumulative distribution of a sample's data to the distribution that would be expected if the data were normal (Abdelaal & Abdelaleem, 2018; Amer, 2018; Dehalwar, 2024; Nguyen et al., 2019). Table 5 shows the results of two normality tests, which illustrate that all variables are not normally distributed because the significance values of those variables are below 0.05. However, the valid sample collected is above 50 responses (296 responses), which enables the application of parametric tests, especially in multivariate research.

Table 6 Normality Test of the Research Variables

| | Kolmogorov Smirnov | | | Shapiro-Wilk | | |
|------------------------------|--------------------|-----|-------|--------------|-----|-------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Independent Variables | | | | | | |
| Pink Product | 0.108 | 296 | 0.000 | 0.931 | 296 | 0.000 |
| Pink Price | 0.128 | 296 | 0.000 | 0.967 | 296 | 0.000 |
| Pink Place | 0.169 | 296 | 0.000 | 0.932 | 296 | 0.000 |
| Pink Promotion | 0.142 | 296 | 0.000 | 0.958 | 296 | 0.000 |
| Mediator Variable | | | | | | |
| Women Attitude | 0.109 | 296 | 0.000 | 0.969 | 296 | 0.000 |
| Dependent Variable | | | | | | |
| Women Buying Behavior | 0.165 | 296 | 0.000 | 0.947 | 296 | 0.000 |

4.4. Correlation Test

Table 6 in Appendix B shows Pearson's correlation coefficients for the research variables at a significance level of 0.05. These values illustrate that there are moderate positive relationships between pink products and each of pink price, pink place, pink promotion, women's buying behavior, and women's attitude, as the Pearson's correlation coefficients lie between 0.3 and 0.7, and these relationships are significant as the p-value is less than 0.05. There is a weak positive relationship between pink price and pink place, as the Pearson's correlation coefficient is less than 0.3, and this relationship is significant as the p-value is less than 0.05. Pink price has positive moderate relationships with each of pink promotion, women's buying behavior, and women's attitude, as the Pearson's correlation coefficients lie between 0.3 and 0.7, and these relationships are significant as the p-value is less than 0.05.

There is a moderate positive relationship between pink place and each of pink promotion, women's buying behavior, and women's attitude, as the Pearson's correlation coefficients lie between 0.3 and 0.7, and these relationships are significant as the p-value is less than 0.05. Moreover, pink promotion has strong positive relationships with women's buying behavior and attitude, as the Pearson's correlation coefficients are greater than 0.7, and these relationships are significant as the p-value is less than 0.05. Finally, the relationship between women's buying behavior and their attitude is found to be strongly positive, as Pearson's correlation coefficient is greater than 0.7, and this relationship is significant as the p-value is less than 0.05.

4.5. Testing Hypotheses

The researcher used path analysis, which is one of the techniques of structural equation modeling (Mukosha et al., 2022; Nasr Eldin & Alhassan, 2023). There are several methods by which structural equation models are estimated, namely: maximum likelihood (ML) estimation, weighted least squares (WLS), and asymptotically distribution-free (ADF) methods (Nguyen et al., 2019). To avoid the non-normality of the data, the researcher used the distribution-free method. The software packages used for analysis are SPSSv26 and R Studio (Dehalwar, 2024; Verma et al., 2024) to

estimate the coefficients and significance of each path between the independent variables (pink marketing strategies) and the dependent variable (women's buying behavior) to test the theoretical model in the presence of a mediator (women's attitude).

Table 7 Pearson's Correlation Coefficients

| | Pink Product | Pink Price | Pink Place | Pink Promotion | Women Buying Behavior | Women Attitude |
|-----------------------|--------------|------------|------------|----------------|-----------------------|----------------|
| Pink Product | 1 | | | | | |
| Pink Price | 0.425** | 1 | | | | |
| Pink Place | 0.293** | 0.158** | 1 | | | |
| Pink Promotion | 0.596** | 0.418** | 0.593** | 1 | | |
| Women Buying Behavior | 0.624** | 0.347** | 0.538** | 0.790** | 1 | |
| Women Attitude | 0.578** | 0.486** | 0.459** | 0.774** | 0.718** | 1 |

Correlation is significant at the 0.05 level (2-tailed).

Figure 2 Path Analysis of the Research Model

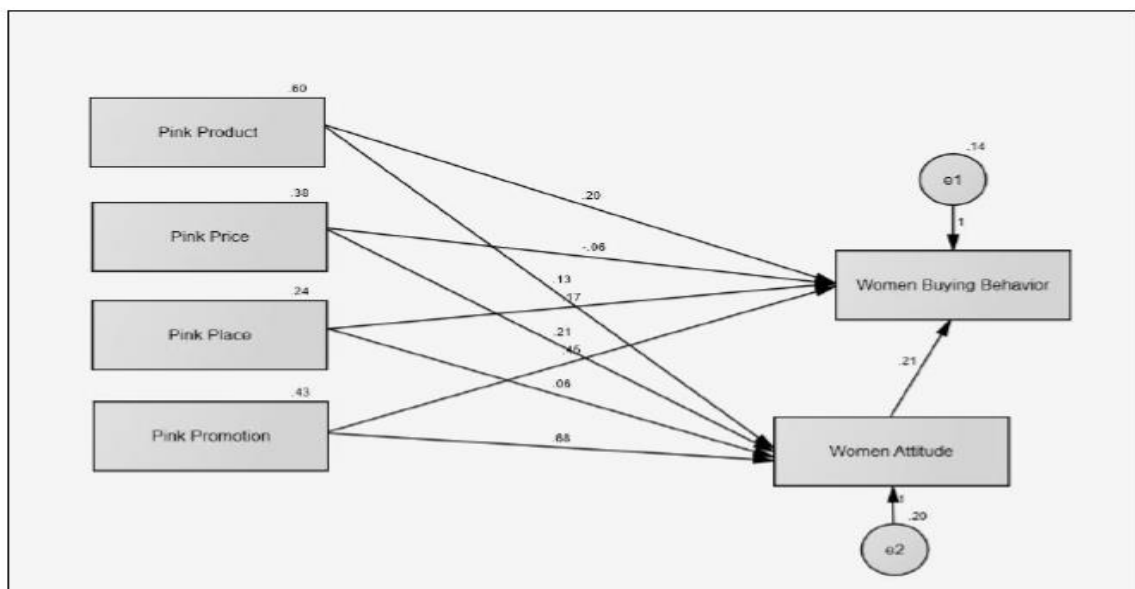


Table 8 Path Analysis Coefficients

| Structural Path | Path Coefficient | C.R (t-value) | Std. Error | Sig. |
|--|------------------|---------------|------------|-------|
| Pink Product → Women Attitude | 0.132 | 3.959 | 0.033 | *** |
| Pink Price → Women Attitude | 0.205 | 4.921 | 0.042 | *** |
| Pink Place → Women Attitude | 0.057 | 1.083 | 0.053 | 0.279 |
| Pink Promotion → Women Attitude | 0.679 | 17.209 | 0.039 | *** |
| Women Attitude → Women Buying Behavior | 0.206 | 4.132 | 0.050 | *** |
| Pink Product → Women Buying Behavior | 0.198 | 6.762 | 0.029 | *** |
| Pink Price → Women Buying Behavior | -0.065 | -1.740 | 0.037 | 0.082 |

| | | | | |
|---|-------|-------|-------|-----|
| Pink Place Behavior → Women Buying Behavior | 0.170 | 3.733 | 0.045 | *** |
| Pink Promotion Behavior → Women Buying Behavior | 0.452 | 9.460 | 0.048 | *** |

C.R.: Critical Value at Significance Level 0.05

Table 9 The Total Effects of Pink Marketing Strategies on Women's Buying Behavior

| Model | Direct Effect | Indirect Effect | Total Effect | Interpretation |
|---|---------------|-----------------|--------------|-------------------|
| Pink Product Behavior → Women Buying Behavior | 0.198 | 0.027 | 0.225 | Partial Mediation |
| Pink Price Behavior → Women Buying Behavior | - | 0.042 | -0.022 | Full Mediation |
| Pink Place Behavior → Women Buying Behavior | 0.170 | 0.012 | 0.181 | Partial Mediation |
| Pink Promotion Behavior → Women Buying Behavior | 0.452 | 0.140 | 0.459 | Partial Mediation |

From figure 2, table 7, and table 8, it was found that with a confidence level of 95%:

- Each of the pink products, pink places, and pink promotions has a significant direct positive effect on women's buying behavior, as their path coefficients are 0.198, 170, and 0.452, respectively. While the pink price has an insignificant effect on women's buying behavior, its significance level exceeds 0.05 ($p = 0.082$). This implies that H1 is partially accepted.
- Pink product, pink price, and pink promotion have a significant direct positive effect on women's attitude, as their path coefficients equal 0.132, 0.205, and 0.679, respectively. While pink place has an insignificant effect on women's attitudes, its significance level exceeds 0.05 ($p = 0.279$). Hence, H2 is partially accepted.
- Women's attitude has a significant direct positive effect on women's buying behavior, as the path coefficient equals 0.206. Therefore, H3 is accepted.
- Women's attitude mediates the relationship between pink marketing strategies and women's buying behavior, as each of pink product, pink price, pink place, and pink promotion has an indirect effect on women's buying behavior through their attitude, as the path coefficients are 0.027, 0.042, 0.012, and 0.140, respectively.
- By combining the direct and indirect effects of pink marketing strategies on women's buying behavior, it is concluded that the total effect of each pink product, pink place, and pink promotion on women's buying behavior is significant and positive, as the path coefficients are 0.225, 0.181, and 0.459, respectively. While the total effect of the pink price on women's buying behavior is significantly negative, as the path coefficient equals -0.022. So, H4 is partially accepted.

To verify the goodness-of-fit for the path analysis, Table 9 shows that the Chi-square value of 54.675 with 15 degrees of freedom is statistically significant at the 0.05 level, which indicates that the model is not a good fit. However, the Chi-Square test is very sensitive to the large sample size, so the results further exhibit that all fit indices obtained (NFI, RFI, IFI, TLI, and CFI) are satisfactory and within the suggested boundaries (close to 1). Accordingly, the results confirm an acceptable fit for the proposed model.

Table 10 Goodness of Fit Indices

| Indices | Abbreviation | Recommended Criteria | Results | conclusion |
|-----------------------|---|--|---------|--------------|
| Chi-Square | χ^2 | P-value > 0.05 | 28.020 | Not Good Fit |
| Degree of Freedom | | | 6 | |
| Level of Significance | | | 0.000 | |
| Normed Chi-Square | $\frac{\chi^2}{DF}$ | $1 < \frac{\chi^2}{DF} < 5$ | 4.670 | Good Fit |
| RMSEA | Root Mean Square Error of Approximation | < 0.05 Good Fit < 0.08 Acceptable Fit | 0.061 | Good Fit |
| NFI | Normed Fit Index | > 0.90 | 0.935 | Good Fit |
| RFI | | > 0.90 | 0.990 | Good Fit |
| IFI | | > 0.90 | 0.971 | Good Fit |
| TLI | Tucker-Lewis Index | > 0.90 | 0.965 | Good Fit |
| CFI | Comparative Fit Index | > 0.90 | 0.997 | Good Fit |

To test the moderating role of women's demographic characteristics (age, education, occupation, and income) on the relationship between their attitude (the independent variable) and buying behavior (the dependent variable). The researcher used a multiple regression model. From tables 10 and 11, it is found that the value of adjusted R² is 0.857, which means that the variations in women's attitudes explain 85.7% of the variations in women's buying behavior. Also, when conducting the analysis of variance (ANOVA), the estimated model is significant as its p-value is less than 0.05.

Table 11 Regression Model Summary

| Model | R Square | Adjusted R Square |
|-------|----------|-------------------|
| 1 | 0.868 | 0.857 |

Table 12 Analysis of Variance (ANOVA)

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|-------|
| Regression | 118.989 | 21 | 5.666 | 85.460 | 0.000 |
| Residuals | 18.167 | 274 | 0.066 | | |
| Total | 137.156 | 295 | | | |

Regarding the results of the regression model, table 12 shows that, with other variables being constant:

- Women's attitude has an insignificant effect on women's buying behavior for those aged 40 years and older, who gained more than EGP 10,000, and worked in the private sector; p-value is $0.725 > 0.05$.
- Women's attitude has a significant effect on women's buying behavior for each of high school, bachelor's degree, postgraduate, not working, and student, as their p-values are higher than 0.05 (0.053, 0.933, 0.583, 0.872, and 0.796, respectively).

From the above points, it is concluded that H5 is partially accepted.

Table 13 Estimates of the Multiple Regression Model

| Model | Unstandardized Coefficients | | t | Sig. |
|--|-----------------------------|------------|--------|-------|
| | Beta | Std. Error | | |
| Constant | 3.949 | 4.747 | 0.832 | 0.406 |
| Women Attitudes | 0.365 | 1.038 | 0.352 | 0.725 |
| Age (=less than 20 years old) | -3.869 | 0.920 | -4.206 | 0.000 |
| Age (=from 20 to less than 30 years old) | -5.344 | 0.772 | -6.919 | 0.000 |
| Age (=from 30 to less than 40 years old) | 3.782 | 1.230 | 3.074 | 0.002 |
| Educational Level (=high school) | 0.987 | 0.413 | 2.390 | 0.018 |
| Educational Level (=bachelor's degree) | -0.260 | 4.956 | -0.052 | 0.958 |
| Educational Level (=postgraduate) | 1.249 | 4.759 | 0.262 | 0.793 |
| Occupation (=not working) | -1.887 | 4.76 | -0.397 | 0.692 |
| Occupation (=student) | -0.222 | 4.951 | -0.045 | 0.964 |
| Occupation (=public sector) | -5.982 | 1.077 | -5.555 | 0.000 |
| Monthly Income (=less than or equal EGP 10000) | 2.894 | 0.459 | 6.303 | 0.000 |
| Women Attitudes * Age (=less than 20 years old) | 0.886 | 0.244 | 3.636 | 0.000 |
| Women Attitudes * Age (=from 20 to less than 30 years old) | 1.197 | 0.189 | 6.346 | 0.000 |
| Women Attitudes * Age (=from 30 to less than 40 years old) | -1.331 | 0.315 | -4.224 | 0.000 |
| Women Attitudes * Educational Level (=high school) | -0.255 | 0.132 | -1.940 | 0.053 |
| Women Attitudes * Educational Level (=bachelor's degree) | -0.092 | 1.095 | -0.084 | 0.933 |
| Women Attitudes * Educational Level (=postgraduate) | -0.572 | 1.041 | -0.549 | 0.583 |
| Women Attitudes * Occupation (=not working) | 0.165 | 1.028 | 0.161 | 0.872 |
| Women Attitudes * Occupation (=student) | -0.285 | 1.101 | -0.259 | 0.796 |
| Women Attitudes * Occupation (=public sector) | 1.414 | 0.266 | 5.32 | 0.000 |
| Women Attitudes * Monthly Income (=less than or equal EGP 10000) | -0.681 | 0.123 | -5.523 | 0.000 |

5. Discussion of the Findings

Firstly, from the descriptive statistics of the respondents' demographic characteristics and the research variables' measures, the researcher found that:

- The highest percentage of the respondents were those aged from 20 to less than 30 years old (72.6%), with a high school education (37.8%), were still students (44.6%), and gained a monthly income ranging from 5000 to less than 10,000 L.E. (51.4%). This is because these respondents were the most

interested in the pink marketing concept and were more likely to fill out the questionnaire than their counterparts.

- When conducting reliability and validity tests, they showed that the measures of each of the pink marketing strategies, women's attitude, and women's buying behavior are reliable and valid, as they are suitable for expressing these variables and can be used many times with different measurement conditions.
- The descriptive statistics of the measures of pink marketing strategies showed that the respondents were highly varied in their encouragement of pink personal care products to try them; this indicates that some of them do not perceive a difference between those products and the other ones that do not use pink colors in the marketing activities. Also, the respondents were highly varied in their concern about the prices when buying personal care products, as some of them cared about the quality regardless of the price and were able to pay high prices for high-quality products. In contrast, other respondents could not afford to buy highly branded products and preferred to buy lower-brand products at lower prices.
- When describing the measures of pink place, the availability of women's sales representatives in the stores was highly variable among the respondents, because most of them deal with stores that have male sales representatives who are more able to convince them to buy than their female counterparts. Moreover, the respondents' responses varied regarding the use of celebrities in promotional activities of pink personal care products and how this affects their purchasing decisions, as some of them are not fans of the celebrities used, so they are not encouraged to buy the products.
- There was a considerable variation among the respondents' buying behavior of personal care products, as some of them do not usually buy those products with their friends to avoid being affected by their opinions, thus decreasing their dissonance behavior after purchasing. In contrast, the other women like to go shopping accompanied by their friends, who are more aware of different brands of personal care products. Women's attitudes' descriptive statistics revealed that most respondents dislike buying pink personal care products due to the lack of difference between them and other products that are directed to all consumers regardless of their gender.

Secondly, the results of testing the first hypothesis, "There is a positive relationship between pink marketing strategies and women's buying behavior," indicated that the hypothesis is partially supported, as each of the pink product, pink place, and pink promotion has a significant direct positive effect on women's buying behavior. This indicates that women buy more personal care products when they find them in many stores with attractive promotional actions. At the same time, the pink price has an insignificant effect on women's buying behavior, as women will not change their buying behavior of personal care products, regardless of price changes. These findings are in line with what was mentioned by Ahmed et al. (2023), Changda

and Bhaumik (2023), Jadhav et al. (2023), and Rizvi et al. (2023), who concluded that women's buying behavior is affected by different pink marketing strategies.

When testing the second hypothesis, “There is a positive relationship between pink marketing strategies and women’s attitude”, the results partially support this hypothesis. It revealed that each of the pink product, pink price, and pink promotion has a significant direct positive effect on women's attitude, expressing that these strategies that highlight women’s beliefs and emotional attachments change their attitude toward pink personal care products. This is in line with Alali et al. (2023), Steind (2023), Zarei and Kharajo (2023), Ikhlaq et al. (2024), and Thorstensson and Ydreborg (2024), who proved a positive relationship between pink marketing strategies and women’s attitude. From testing the third hypothesis, a positive relationship between women’s attitude and their buying behavior is proven, as women buy more personal care products that enhance their appearance. This is consistent with Ezzat and Rady (2021), Abdelamir et al. (2022), Zhang et al. (2022), and Hameed et al. (2023) who agreed that attitude has a significant effect on women’s buying behavior by shaping their habits, behavioral intentions, and favorable opinions about the products that are directed to them and influences their buying behavior of those products.

When testing the fourth hypothesis, “Women's attitude has a positive mediating role in the relationship between pink marketing strategies and women's buying behavior,” the hypothesis was partially supported. This is because the total effect of pink product, pink place, and pink promotion on women's buying behavior is mediated by women’s attitude, which is found to be positive. This indicates that the existence of personal care products directed to women with suitable promotional activities that talk to their feelings and needs, and are available in convenient places with women's sales representatives, all these factors change the women’s attitude and motivate them to buy pink personal care products and so enhance the revenues of the manufacturers of these products. These results are in line with Zidan (2020), Rodriguez (2022), Marina et al. (2023), and Nofal and Mohamed (2023), who stated that women's buying behavior is affected by their attitudes, the availability of the products, and the promotional actions. Also, they added that cognitive and affective aspects can affect women's buying behavior, as they buy a product when they have a favorable opinion about it.

While the total effect of the pink price on women's buying behavior is found to be negative, which reflects that women consumers are affected by the high prices of personal care products, even when they express their feeling of beauty, and so search for brands with lower prices to buy small quantities of the expensive ones. These findings match those of Dertas (2021) and Ezzat and Rady (2021), who cited that some women consumers are price sensitive and prefer reduced prices and presenting discounts for personal care products. From the findings of testing the fifth hypothesis, “Women's demographic characteristics (age, education, occupation, income) have a significant and positive moderating role on the relationship between their attitude and buying behavior,” the researcher declared that it is partially accepted. This is because women aged 40 and older, who gained more than EGP 10,000, and who worked in the private sector, do not change their buying behavior of personal care products because of the change in their attitude toward these products. This suggests that this group of

women is loyal to specific brands of personal care products and buys them regardless of the recently emerged strategies of pink marketing.

On the contrary, women aged less than 40 years old, working in the public sector, earning less than EGP 10.000, change their buying behavior as their attitude changed toward pink personal care products. Pink marketing strategies (pink product, pink price, and pink promotion) shape their attitude and make them buy more personal care products. However, the buying behavior of high school students, bachelor's degree holders, postgraduate students, non-working individuals, and students does not affect their attitude. These findings are partially in line with what has been mentioned in the literature, such as Changda and Bhaumik (2023), Gârdan et al. (2023), Hadi et al. (2023), Jadhav et al. (2023), and Rizvi et al. (2023), who stated that consumers' demographic characteristics, including age, income, and education, influence their buying behavior.

6. Research Recommendations

The researcher suggests the following recommendations to personal care companies and stores:

- Intensify women's awareness of pink marketing and its difference from that directed to men, and how it makes women's lives better.
- Increase women's involvement in designing their personal care products by collecting their suggestions and opinions through surveys, either online when visiting the official websites and social media pages or offline when visiting the stores.
- Ease women's accessibility to different stores that provide personal care products through opening more branches, launching web pages, and facilitating delivery services.
- Provide different pricing schemes to encourage women with low levels of income to buy more.
- Offer discounts and merits to women working in private and public sectors to encourage them to buy more personal care products.
- Design advertisements with messages that highlight the emotional attachments of obtaining the products that motivate women to buy them.
- Display in-store short and entertainment videos communicating to women's affective aspects of having pink personal care products for a better life.

7. Research Limitations and Future Research

This research has some limitations that the researcher intends to overcome in future research. The results of this research cannot be generalized, as a non-probability convenience sample was used due to the difficulty of obtaining the mean and variance

of all women consumers geographically dispersed in Egypt or their database available to personal care stores. So, it is recommended for future researchers to get access to these databases and use a probability sample with results that can be generalized. This research focused on studying the moderating effect of only four demographic characteristics, which are age, education, occupation, and income. This is because they were commonly used in previous studies, like Ahmad et al. (2021), Abraham et al. (2022), Al Maliki et al. (2022), Machová et al. (2022), and Bresciani et al. (2023). So, It is recommended for future research to include other demographic characteristics such as marital status and nationality.

The research focused on studying the effects of only four elements of marketing strategies: product, price, place, and promotion. This is because, to the best of the researcher's knowledge, they were commonly found in the previous studies, such as Dewi (2021), Karimi and Nassery (2022), García-Salirrosas and Rondon-Eusebio (2022), and Gârdan et al. (2023). However, other studies, like Ho et al. (2022), Joha et al. (2022), Jadhav et al. (2023), and Suryana and Anggiani (2023), stated that marketing mix strategies are comprised of product, price, place, promotion, packaging, people, physical evidence, and process. So, it is recommended for future research to study the effect of packaging, product providers, physical evidence, and processes on women consumers' buying behavior. The research did not cover how the different types of buying behavior (complex, dissonance-reducing, variety-seeking, and habitual) could change the effect of pink marketing strategies on women's final buying behavior, as this required sufficient data about women's degree of involvement and the significance of the differences among personal care products, which the researcher was unable to access. So, it is recommended for further research to go through this insight.

The researcher used only two methods for testing the normality of the research variables, which are the Shapiro-Wilk test and the Kolmogorov-Smirnov test. Although there are other methods such as histogram, probability plot (PP-plot), quantile-quantile plot (QQ-plot), and Cramér-von Mises test (Abdelaal & Abdelaleem, 2018; Amer, 2018; Dehalwar, 2024; Nguyen et al., 2019). Hence, it is recommended for further research to use those methods. This research did not deeply study the Theory of Planned Behavior (TPB) that explains women's buying behavior. However, it studied only the role of women's attitudes in shaping their buying behavior. Therefore, further research is required to fully discuss the other dimensions of TPB, which are subjective norms and perceived behavioral control (Baluku, 2024; Fauzi et al., 2024; Tiwari et al., 2024).

References

- Abdelaal, M., & Abdelaleem, M. (2018). *Statistical analysis using SPSS 25* (Ain Shams University).
 Abdelamir, O., El Khazragy, M., & Abdelzahra, A. (2022). The effect of pink marketing on consolidating the mental image of a product: An exploratory study of the opinions of a sample of women customers of Al-Khouk commercial complex - Mansour branch. *Journal of Baghdad's Faculty of Comprehensive Economic Sciences*, (67), 63–78.

- Abraham, J., Floreto, S., Pagkalinawan, M., Antonio, E., & Etrata, J. (2022). Consumer perception of influencer marketing efforts of brands in the beauty and cosmetics industry. *International Journal of Social and Management Studies (IJOSMAS)*, 3(2), 105–118.
- Abudalfa, S., Alzerei, A., & Salem, M. (2024). Identifying customer attitudes toward the exploitation of women in ads using machine learning. In *Information and communication technology in technical and vocational education and training for sustainable and equal opportunity* (Vol. 39, pp. 185–193). Springer.
- Agrawal, P., Aggarwal, V., Ibrahim, J., Vyas, P., & Mukherjee, S. (2024). A study on factors influencing the buying behavior of consumers towards financial products in India. *Journal of Informatics Education and Research*, 4(2), 663–674.
- Ahmad, R., Ahmad, M., Farhan, M., Arshad, M. A., & Ali, E. (2021). The relationship within green marketing strategies and market performance of Pakistan SMEs. *Elementary Education Online*, 19(3), 1886–1895.
- Ahmed, S. F. A., Hussain, S. A., & Kumari, S. M. (2023). Effect of digital marketing platform on purchasing decision. In *Emerging paradigms in multidisciplinary research* (1st ed., pp. 148–155). Weser Books.
- Alali, B., Mosbah, E., & Ali, A. (2023). Consumer decision-making and segmentation of the dates market in Saudi Arabia. *Italian Journal of Food Science*, 35(3), 141–154.
- Alkhizar, M., & Vidani, J. (2023). Exploring the factors influencing consumer buying behaviour of LG products: A comprehensive study. *Journal of Advanced Research in Economics and Business Management*, 6(2), 1–8.
- Al-Maliki, L., K. Al-Mamoori, S., A. Jasim, I., El-Tawel, K., Al-Ansari, N., & G. Comair, F. (2022). Perception of climate change effects on water resources: Iraqi undergraduates as a case study. *Arabian Journal of Geosciences*, 15(503), 1–13.
- Amer, A. (2018). *Modeling the equations for humanities and social sciences: Basics, applications, and issues*. Riyadh: Naief University for Publications.
- Baluku, M. (2024). Mindfulness and the theory of planned behavior: Explaining entrepreneurial intentions of refugees in Uganda. *Journal of Enterprising Communities: People and Places in the Global Economy*, 18(4), 1–23.
- Barari, N., Makhija, R., Das, J., Sharma, M., & Sivasanker, A. (2023). Pink tax: A price discrimination with unfortunate females. *China Petroleum Processing and Petrochemical Technology*, 23(2), 3350–3358.
- Boseila, I., Mahrous, A. A., & Abouaish, E. (2023). Global brands or local heroes? A comparative study of Egyptian consumer perceptions and behaviors in the fashion and apparel industry. *American Journal of Business*, 38(4), 211–228.
- Bresciani, S., Rehman, S., Alam, M., Ashfaq, K., & Usman, M. (2023). Environmental MCS package, perceived environmental uncertainty, and green performance: In green dynamic capabilities and investment in environmental management perspectives. *Review of International Business and Strategy*, 33(1), 105–126.
- Caioni, G., Benedetti, E., Perugini, M., Amorena, M., & Merola, C. (2023). Personal care products as a contributing factor to antimicrobial resistance: Current state and Novel Approach to investigation. *Antibiotics*, 12(4), 1–12.
- Caso, D., Canova, L., Capasso, M., & Bianchi, M. (2024). Integrating the theory of planned behavior and the self-determination theory to promote Mediterranean diet adherence: A randomized controlled trial. *Applied Psychology Health Well-Being*, 2024(16), 80–101.
- Central Agency for Public Mobilization and Statistics (CAPMAS). (2024, March). *Egypt in figures: Population, total no. of females*. https://www.capmas.gov.eg/Pages/StaticPages.aspx?page_id=5035
- Changda, H., & Bhaumik, A. (2023). Color psychology's impact on marketing, advertising, and promotion. *International Journal of Management and Human Science*, 07(01), 24–32.
- Chua, A. B., Hidalgo, A., Huyo-A, J. J., & Santos, A. J. G. (2022). Pink power: The extent of awareness, driving factors, and overall perception of Filipina youth consumers in Metro Manila,

- Philippines on pink tax caused by pink marketing strategy. *Journal of Business and Management Studies*, 4(2), 277–293.
- Collins, H. N., Johnson, P. I., Calderon, N. M., Clark, P. Y., Gillis, A. D., Le, A. M., Harley, K. G. (2021). Differences in personal care product use by race/ethnicity among women in California: Implications for chemical exposures. *Journal of Exposure Science & Environmental Epidemiology*, 33(2), 292–300.
- Confetto, M., Palazzo, M., Ferri, M., & Normando, M. (2023). Brand activism for sustainable development goals: A comparative analysis in the beauty and personal care industry. *Sustainability*, 15(6245), 1–15.
- Corrochano, D., Ferrari, E., López-Luengo, M. A., & Ortega-Quevedo, V. (2022). Educational gardens and climate change education: An analysis of Spanish preservice teachers' perceptions. *Education Sciences*, 12(275), 1–18.
- Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approach* (4th ed.). SAGE Publications.
- Czarniecka-Skubina, E., Stasiak, D. M., Latoch, A., Owczarek, T., & Hamulka, J. (2022). Consumers' perception and preference for the consumption of wild game meat among adults in Poland. *Foods*, 11(830), 1–19.
- Dehalwar, K. (2024). *Basics of research methodology: Writing and publication* (1st ed.). EduPub and Indian Council of Social Science Research.
- Dertas, M. V. (2021). *The pink tax: Marketing strategy or gender discrimination? Comparing female and male consumers' price and packaging preferences* (Master's Thesis, University of Fribourg).
- Dewi, P. (2021). Determination of green marketing strategies through marketing communication in the business world in the society 5.0 era. *Advances in Economics, Business and Management Research*, 180, 181–187.
- El Ganaby, F. (2021). Investing pink marketing strategy in achieving marketing strategies of a bank: an exploratory study on a sample of pink customers of the National Bank of Baghdad. *Journal of Baghdad's Faculty of Comprehensive Economic Sciences*, (69), 1–21.
- El-Kady, S. M. (2022). Consumer buying behavior during the COVID-19 pandemic: A comparative study. *Scientific Journal for Financial and Commercial Studies and Research (SJFCSR)*, 3 (2), 51–79.
- Ettinger, L., Falkeisen, A., Knowles, S., Gorman, M., Barker, S., Moss, R., & McSweeney, M. B. (2022). Consumer Perception and Acceptability of Plant-Based Alternatives to Chicken. *Foods*, 11(2271), 1–12.
- Ezzat, M., & Rady, A. (2021). The impact of pink marketing on women's purchasing decisions at destinations and hotels: Applying on Egyptian domestic tourism. *The Scientific Journal of the Faculty of Tourism and Hotels, Alexandria University*, 18(2), 50–71.
- Fauzi, M., Hanafiah, M., & Kunjuran, V. (2024). Tourists' intention to visit green hotels: Building on the theory of planned behavior and the value-belief-norm theory. *Journal of Tourism Futures*, 10(2), 225–276.
- Freihat, S. M., Alotoum, F. J., & Homs, D. M. (2021). Pink marketing and women's purchasing decision-making. *Multicultural Education*, 7(6), 670–681.
- García-Salirrosas, E., Rondon, E., & Rafael F. (2022). Green marketing practices related to key variables of consumer purchasing behavior. *Sustainability*, 14(8499), 1–19.
- Gârdan, I. P., Micu, A., Paștiu, C. A., Micu, A. E., & Gârdan, D. A. (2023). Consumers' attitude towards renewable energy in the context of the energy crisis. *Energies*, 16(2), 676.
- Hadi, N. U., & Aslam, N. (2023). Demographic factors and consumer attitude towards unsolicited mobile-based marketing messages: A factorial design. *Online Journal of Communication and Media Technologies*, 13(1).
- Hameed, F., Malik, I. A., Hadi, N. U., & Raza, M. A. (2023). Brand awareness and purchase intention in the age of digital communication: A moderated mediation model of celebrity endorsement

- and consumer attitude. *Online Journal of Communication and Media Technologies*, 13(2), e202309.
- Ho, C., Liu, Y., & Chen, M. (2022). Factors influencing watching and purchase intentions on live streaming platforms: From a 7Ps marketing mix perspective. *Information*, 13(239), 1–19.
- Hussein, F. M., Gabr, T. R., & Elziny, M. N. (2024). The impact of pink marketing on Egyptian women's buying behavior in the hospitality industry. *International Journal of Tourism, Archaeology, and Hospitality (IJTAH)*, 4(1), 147–163.
- Ikhlaq, A., Zahra, M., Ans, M., & Hamid, A. (2024). Pink communication: The mediating role of awareness and fear in the effects of media exposure on breast self-examination. *Remittances Review*, 9(4), 1365–1385.
- Jadhav, H. B., Sablani, S., Gogate, P., Annapure, U., Casanova, F., Nayik, G. A. Khaneghah, A. M. (2023). Factors governing consumers buying behavior concerning nutraceutical product. *Food Science & Nutrition*, 11(9), 4988–5003.
- Jahromi, A. S., Jokar, M., Sharifi, N., Omidmokhtarloo, B., & Rahmanian, V. (2023). Global knowledge, attitude, and practice towards COVID-19 among pregnant women: a systematic review and meta-analysis. *BMC Pregnancy and Childbirth*, 23(1).
- Jaiwant, S. (2023). Changing structure of consumer buying behavior and expectation in the digital era. In *Industry 4.0 and the digital transformation of international business* (pp. 207–215). Springer.
- Joha, A., Hassan, S., Shamsudin, F., & Hasim, A. (2022). Purchasing behavior among small and medium enterprises (SME) customers during the COVID-19 pandemic using the 7Ps approach. *Journal of Positive School Psychology*, 6(3), 529–539.
- Karimi, A., & Nassery, S. (2022). A study of applying green marketing strategies and its influence in company standing. *International Journal in Management and Social Science*, 10(8), 18–31.
- Khan, Y., Hameed, I., & Akram, U. (2023). What drives attitude, purchase intention, and consumer buying behavior toward organic food? A self-determination theory and theory of planned behavior perspective. *British Food Journal*, 125(7), 2572–2587.
- Machová, R., Ambrus, R., Bakó, F., & Zsigmond, T. (2022). The impact of green marketing on consumer behavior in the market of palm oil products. *Sustainability*, 14(1364), 1–25.
- Marina, D., Pandjaitan, N., Hasanah, N., & Cesna, G. P. (2023). Analysis of lifestyle and consumer attitude towards the intention to purchase a personal car during the pandemic. *APTISI Transactions on Management (ATM)*, 7(1), 16–33.
- Mukosha, M., Muyunda, D., Mudenda, S., Lubeya, M. K., Kumwenda, A., Mwangi, L. M., & Kaonga, P. (2022). Knowledge, attitude, and practice towards cervical cancer screening among women living with human immunodeficiency virus: Implication for prevention strategy uptake. *Nursing Open*, 10(4), 2132–2141.
- Nasr Eldin, H., & Alhassan, A. (2023). The effect of corporate social responsibility on customer trust, customer satisfaction, and customer loyalty: Uber service in Egypt. *Arab Journal of Administration*, 43(4), 429–448.
- Nguyen, H., Nguyen, N., Nguyen, B., Lobo, A., & Vu, P. (2019). Organic food purchases in an emerging market: The influence of consumers' personal factors and green marketing practices of food stores. *International Journal of Environmental Research and Public Health*, 16(1037), 1–17.
- Nofal, R., & Mohamed, A. (2023). The impact of a global rising prices crisis during the Russia-Ukrainian war on the Egyptian consumer buying behavior. *The Scientific Journal of Specific Education and Applied Sciences*, 6(15), 289–377.
- Odiike, J., Egele, A., & Uzor, J. (2024). Social media communication and buying behavior on smart phones of female's students of school of health technology. *Global Journal of Finance and Business Review*, 7(2), 1–20.
- Pookulangara, S., Wen, H., & Bharath, J. (2022). Consumer attitudes toward ordering from cloud kitchens: A gender and marital status perspective. *International Journal of Contemporary Hospitality Management*, 35(5), 1859–1879.

- Rehman, F. U., & Zeb, A. (2022). Translating the impacts of social advertising on Muslim consumers' buying behavior: The moderating role of brand image. *Journal of Islamic Marketing*, 14(9), 2207–2234.
- Rizvi, S. R., Amir, F., Ashiq, I., & Galvez, E. S. (2023). Impulsive buying behavior of Omani women in apparel industry. *European Journal of Business and Management*, 15(2), 26–35.
- Rodriguez, S. (2022). *Marketing: Color psychology in branding* (PhD, California State University).
- Sapiains, R., Azócar, G., Moraga, P., Valenzuela, C., Aldunce, P., Cornejo, C., Rojas, M., Pulgar, A., Medina, L., & Bozkurt, D. (2022). Are citizens ready for active climate engagement or stuck in a game of blame? Local perceptions of climate action and citizen participation in Chilean Patagonia. *Sustainability*, 14(12034), 1–21.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach* (7th ed.). Wiley.
- Siddiqui, S. A., Gerini, F., Ikram, A., Saeed, F., Feng, X., & Chen, Y. (2023). Rabbit meat: Production, consumption, and consumers' attitudes and behavior. *Sustainability*, 15(3), 2008.
- Singh, G., Aiyub, A. S., Greig, T., Naidu, S., Sewak, A., & Sharma, S. (2021). Exploring panic buying behavior during the COVID-19 pandemic: A developing country perspective. *International Journal of Emerging Markets*, 18(7), 1587–1613.
- Steind, A. (2023). *No more pink barbies? Investigating customer acceptance towards gender neutral marketing initiatives* (Master Thesis, Linnaeus University).
- Sudibyo, N., & Boros, A. (2024). Technological transformation on consumer behavior: A review of the beauty industry. *Acta Carolus Robertus*, 14(1), 197–212.
- Suryana, M., & Anggiani, S. (2023). The role of marketing mix (7 P's) towards repurchase intention of Alibaba's fried banana in Bandung city. *Journal of Management, Business, and Social Sciences*, 1(1), 67–75.
- Thorstensson, E., & Ydreborg, M. (2024). *The impact of colour on purchase intention in the cosmetics and personal care industry: A gender-based analysis* (Bachelor Thesis, JÖNKÖPING University).
- Tiwari, A., Kumar, A., & Kant, R. (2024). Impact of fashion influencers on consumers' purchase intentions: Theory of planned behavior and mediation of attitude. *Fashion Influencer Marketing*, 28(2), 209–225.
- Verma, R., Verma, S., & Abhishek, K. (2024). *Research methodology* (1st ed.). Booksclinic Publishing.
- Zaman, K., Iftikhar, U., Rehmani, M., & Irshad, H. (2022). Embracing biodegradable bags: Effects of ethical self-identity on consumer buying behavior. *Social Responsibility Journal*, 19(3), 474–485.
- Zarei, G., & Kharajo, V. (2023). The role of pink marketing mixed elements in women's cosmetic purchase decision. *Journal of Woman and Culture*, 14(54), 1–14.
- Zhang, Y., Zhou, Y., Liu, Y., & Xiao, Z. (2023). Research on the influencing mechanism of the effect of brands' sustainable behaviors on consumer attitudes: An Empirical Study on Clothing Brands. *Sustainability*, 15(3), 2351. <https://doi.org/10.3390/su15032351>.
- Zidan, H. (2020). The role of pink marketing in women's buying process of touristic products: A field study on women's beaches in Egyptian North Coast. *Journal of Association of Arab Universities for Tourism and Hospitality*, 18(2), 202–225.

Appendix A. Questions used in Exploratory Research

1. How do you find using pink colors in marketing for personal care products?
2. How do you perceive the marketing activities for personal care products done by different companies?
3. Which is preferable for you: dealing with female sales representatives or males, and why?
4. How often do you buy products directed to you?
5. How do you feel when buying pink personal care products?
6. If your friends ask for your advice when buying pink personal care products, what will be your answer?

Appendix B. Research Questionnaire

Dear Ladies,

The researcher is studying the extent to which green (environmentally friendly) marketing strategies done by fast food restaurants are affecting your concern about climate change risks. So, your participation in filling in this questionnaire is appreciated and important for conducting this research.

Note: These data are used only for academic purposes.

Thanks in advance

The researcher

Thanks for your time

1. Do you buy personal care products of pink colors?

☐ Yes

☐ No

If your answer is **No**, thanks for your time, and no need to complete the questionnaire. If your answer is **Yes**, please move to the next questions:

1. Which of the following products do you buy? (you can choose more than one)

| | | | | | |
|---|---|---|--|---|--------|
|  |  |  |  |  | others |
| | | | | | |

2. Please determine your level of agreement on the following statements; from (1) strongly disagree to (5) strongly agree:

| Statements | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| | (1) | (2) | (3) | (4) | (5) |
| 1. Personal care products have bright colors like pink and red | | | | | |
| 2. Pink personal care products have attractive designs | | | | | |
| 3. Pink personal care products match my preferences and needs | | | | | |
| 4. Pink Personal care products encourage me to try them | | | | | |
| 5. I find the prices of pink personal care products to be reasonable | | | | | |
| 6. I usually compare prices before and after buying pink personal care products | | | | | |
| 7. I care about the prices when buying pink personal care products | | | | | |
| 8. Prices of pink personal care products are motivating me to buy | | | | | |
| 9. I usually buy the pink personal care products even they are of a high price | | | | | |
| 10. I can easily find pink personal care products in different stores | | | | | |
| 11. Most of the stores' sales representatives are women | | | | | |
| 12. I find the physical surroundings of the store (i.e. design, colors, decorations) are convenience | | | | | |
| 13. Promotion of pink personal care products includes messages of keeping me beautiful all the time | | | | | |
| 14. Using celebrities in promotional activities of pink personal care products encourages me to buy | | | | | |
| 15. Promotional activities of pink personal care products match my preferences | | | | | |
| 16. Sales promotion (i.e. buy one get one free, extra amount for free, coupons) of pink personal care products encourage me to buy | | | | | |
| 17. I usually attracted to catalogs of pink personal care products | | | | | |
| 18. I prefer to buy personal care products directed to me | | | | | |
| 19. I'm interested in buying pink personal care products | | | | | |
| 20. I can afford to buy pink personal care products | | | | | |
| 21. I usually buy pink personal care products with my friends | | | | | |
| 22. The availability of pink personal care products motivates me to buy more | | | | | |
| 23. I think pink personal care products are reliable | | | | | |
| 24. I find pink personal care products are valuable | | | | | |
| 25. Buying pink personal care products is a good idea | | | | | |
| 26. I like buying pink personal care products | | | | | |
| 27. I will continue to buy pink personal care products | | | | | |
| 28. I will recommend pink personal care products to other women | | | | | |

3. Age:

- ☐ Less than 20 years old
- ☐ 20-30 years old
- ☐ 30-40 years old
- ☐ 40 years old and above

4. Education:

- ☐ High school
- ☐ Bachelor degree
- ☐ Post graduate (Master, PHD...)
- ☐ Others

5. Occupation:

- ☐ Private sector
- ☐ Public sector
- ☐ Student
- ☐ Not working

6. Monthly Income:

- ☐ Less than 5000 L.E.
- ☐ 5000-10000 L.E.
- ☐ 10000-15000 L.E.
- ☐ 15000 L.E. and more