

QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

THE IMPACT OF INDIVIDUALS' SUSCEPTIBILITY TO PERSUASION ON
PERCEIVED INFORMATION QUALITY AND PURCHASE INTENTION AMONG
MILLENNIALS

BY

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ABSTRACT

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Title: The Impact of Individuals' Susceptibility to Persuasion on Perceived Information Quality and Purchase Intention among Millennials

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Social media is growing in popularity and has assumed a more central role in information dissemination more recently. This development has increased the opportunity for firms to communicate, persuade, and influence customers' behaviors. However, little is known about the antecedents of susceptibility to persuasion among millennials. Millennials' are individuals born between (1982-2002) the age and have become an important segment for marketers. Thus, this paper seeks to examine the effect of millennials' susceptibility to persuasion on perceived information quality and purchase intention. Precisely, the paper evaluates the effect of susceptibility to persuasion, based on Cialdini's six persuasion dimensions, namely, reciprocity, commitment/consistency, social proof, authority, scarcity, and liking on perceived information quality, as well as the mediating effect of perceived information quality in the relationship between susceptibility to persuasion on purchase intention. The results reveal that four of the persuasion dimensions explain a significant amount of variance in perceived information quality. Commitment/consistency, authority, scarcity, liking and perceived information quality are significantly related. There is partial support for the mediating effects of perceived information quality in the relationship of persuasion dimensions with purchase intention. Also, there is partial support for the moderating effects of gender and educational level in the relationship between persuasion

dimensions and perceived information quality. The study presents key findings, and the results provide significant theoretical and managerial implications.

DEDICATION

To my beloved family, thank you for your endless love and support.

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CHAPTER 1: INTRODUCTION

1.1 Overview

Research interest in persuasion has been growing, particularly in the fields of psychology and marketing. Traditionally, persuasion has been defined as human communication intended to influence other individuals' judgments and actions (Simons, 2001). Persuasion influences consumer behavior, and individuals are susceptible to persuasion—in other words, they are willing to modify their judgment in response to that expressed by people around them or based on specific events. Both marketers and researchers have recognized the significant influence of persuasion on customers. Studies have emphasized persuasion effectiveness and shown that certain precepts significantly influence individuals' susceptibility to persuasion (Cialdini, 2001, 2004; Crowley & Hoyer, 1994; Tormala & Petty, 2004). Persuasion has sparked the attention of numerous scholars. For example, Harjumaa and Oinas-Kukkonen (2007) discussed persuasion theories and IT design. Khaled et al. (2009) examined persuasion and culture in serious games. Yamakami (2013) discussed mass, interpersonal persuasion. By contrast, Sokolova and Kefi (2020) investigated beauty and fashion influencers on two social media platforms, YouTube and Instagram, from a persuasion cue perspective.

Robert Cialdini identified six persuasion dimensions—reciprocity, commitment/consistency, social proof, authority, scarcity, and liking—as principles that increase individuals' behavioral compliance and message persuasiveness (Cialdini, 1993, 1994). Marketing managers understand the effectiveness of persuasion. Many popular brands have used various persuasion techniques in their marketing efforts to capture customers' attention. For example, Apple mastered the art of persuasion using Cialdini's six persuasion dimensions; they leveraged reciprocity with a collaboration

done between iTunes and a famous rock band, U2. iTunes distributed the band's album for free to its loyal customers. Apple often uses dimension scarcity during its product launch campaign, wherein a limited number of new iPhones/iPads are available on the launch day. Authority is conveyed using Apple Geniuses (i.e., trained employees, whose job is to help consumers face technical-related issues). Moreover, Apple uses social proof by allowing consumers to leave testimonials on Apple's online store, likability by having physically attractive people in their advertisements, and commitment/consistency by delivering the same sleek experience and sophistication by using their products or by visiting their store. Therefore, Cialdini's dimensions are fundamental to marketing strategy and effective in marketing practice.

Persuasion is not a new concept in social life, and it has always been a constant presence; however, nowadays, people are probably more exposed to persuasive information than ever before (Humă et al., 2020). Technology has enlarged social persuasion, and the development of social networking has leveraged the possibility of changing people's attitudes and behavior. Moreover, technology has allowed more convenient communication methods among consumers and between brands and consumers, thus processing purchase decisions. How people interact with technological devices affects their lives in numerous ways (Fogg, 2003). Therefore, technology has moved persuasion to an electronic path and created persuasive technologies that can take the form of websites or mobile applications, employing technological devices' new capabilities to change peoples' behavior.

Technology has also changed marketing activities, and social media has emerged as an essential and effective marketing tool for companies (De Vries & Carlson, 2014; Sokolova & Kefi, 2019). There has been a growing research interest in social media platforms, such as Facebook, YouTube, Twitter, and Instagram (Dwivedi,

2018; Knoll, 2016; Shiau, 2017; Sokolova & Kefi, 2020). Nevertheless, limited data are available on social media implications on persuasion, especially considering that social media platforms have become an integral part of peoples' daily lives and expose them to a large variety of information. Consumer characteristics and the context in which information is presented influence the way consumers process information (e.g., Flavián et al., 2017; Petrova & Cialdini, 2005, Petrova & Cialdini; 2008). As such, information advocates the link between persuasiveness influence and consumer behavior. Fundamentally, companies' information through advertisements is never static, such that it evolves according to their target market. Strong knowledge of customers and the target market leads to effective marketing. Also, understanding the target market helps to maintain information cascades.

Millennials, people born between 1982 and 2002 (Ndubisi & Natarajan, 2018), grew up all along with the web revolution. This era has deeply affected the way this generation perceives the world. Because of the technological world, millennials are more open-minded than any other generation, and networking is an essential part of their lives. Thus, brands targeting millennials need to be aware of their qualities and characteristics and know how to connect with their mindset. Typically, millennials possess a significant tolerance toward using social media platforms, among other things, searching for information, products, and services on the Internet. Among their characteristics is the need to focus on brands, friends, digital, and fun (Benckendorff, 2010; Pentescu, 2016) and be savvy shoppers, adopting their comfort with technology to determine trends and find the best prices (Pentescu, 2016). This generation is highly educated. Millennials are becoming the most educated generation than any other generation (Bannon et al., 2011; Benckendorff, 2010; Pentescu, 2016; Smith et al.,

2013). Therefore, the quality of information offered to this generation should be of high quality to influence their behavior.

Moreover, perceptions of information quality about products and services on social media are crucial in people's purchase decisions. Thus, determining peoples' perceptions of online information or online message quality is essential for evaluating their willingness to purchase (Cheung, Lee, & Rabjohn, 2008), more so with millennials. This generation is a much-desired demographic of many marketers (Olenski, 2013; Ndubisi & Natarajan, 2018); however, this segment is ill-understood (Ndubisi & Natarajan, 2018).

Accordingly, this study explores millennials' susceptibility to persuasion, focusing on Cialdini's six persuasion dimensions (i.e., reciprocity, commitment, social proof, authority, scarcity, and liking) used as heuristic rules. According to Chaiken (1980), persuasion cues may be heuristically processed, and unlike systematic processing, they are effortless and may predominate in many persuasion settings. While processing a message heuristically, simple decision rules are used to form an opinion. These persuasion dimensions are used in situations where people have no interest in engaging in effortful processing, such as the daily purchasing of products and services. Moreover, the study considers perceived information quality as a mediator between millennials' susceptibility to persuasion and purchase intention. The study also investigates the moderating effect of education and gender on the relationship between persuasion dimensions and perceived information quality. The paper used the elaboration likelihood model (ELM) (Petty & Cacioppo, 1986) and generational theory (Mannheim, 1952; Ndubisi & Natarajan, 2018) to elucidate the research model and demonstrate the relations between the constructs and sample selection.

Our results have considerable practical relevance. Companies have realized the importance of using persuasion dimensions in traditional and technological marketing, and studies have explored ways of translating these persuasion dimensions into social marketing strategies. However, researchers have left other marketing practitioners, particularly those targeting millennials, with limited practical directions or guidelines. It is unclear how persuasion dimensions impact millennials' purchase intentions considering the quality of the company's online materials. The present research aims to bridge this literature gap.

1.2 Research Contribution

This paper examines a comprehensive list of key persuasion variables that have been separately explored in the technology marketing literature in other contexts. Specifically, the study investigates an integrative model of persuasion dimensions (with a technological perspective in the context of social media marketing) and how they impact millennials' purchase intentions via information quality. Studies have either examined the role of social media persuasion from the concepts of social media influencers (e.g., Freberg et al., 2011; Sokolova & Kefi, 2019) or user-generated content (e.g., Kim & Song, 2018; Thompson & Malaviya, 2013). Moreover, several scholars have considered information in their research. For example, Chu and Kamal (2008) attempted to understand information processing through bloggers' trustworthiness, while Muhammad et al. (2014) demonstrated customer commitment through information quality, trust, and satisfaction. Priyadarshini et al. (2017) studied the information quality of corporate employment websites, and Tiene et al. (2019) examined customer-to-customer (C2C) electronic word-of-mouth using information persuasion. However, such studies have not analyzed the association between susceptibility to persuasion and perception of the quality of companies' information can

influence their intention to purchase. Researchers have also paid limited attention to understanding how persuasion dimensions might influence millennials' behavioral intentions in the technological environment. Therefore, the thesis addresses this gap by introducing perceived information as a mediator between persuasion dimensions and purchase intentions.

Specifically, the paper considers six persuasion dimensions—reciprocity, commitment, social proof, authority, scarcity, and liking—in the context of a relatively new social media platform (i.e., Instagram). The discussion around social media and its usage has been considered from the customer's and marketer's perspective, especially marketers using social media platforms to advertise companies' products and services (Akar & Topçu, 2011). Instagram has more than one billion monthly active accounts, and 90% of users are following at least one business account, according to Instagram (2019). Although studies have explored Instagram influencers (e.g., De Veirman et al., 2017) and Instagram usage in political marketing (e.g., Munoz et al., 2017), this paper investigates how millennials are susceptible to persuasion and how they perceive information quality and hence develop behavioral intentions.

This study offers significant practical and theoretical contributions. Theoretically, it expands the existing knowledge on persuasive technology and marketing by evaluating persuasion-related variables in new contexts that have gained limited attention from scholars. The persuasion dimensions investigated in this thesis consist of psychological aspects combined with technological aspects to explain consumer purchase intentions. Consequently, the study findings provide practical contributions to marketing managers and marketers by determining the extent to which persuasion dimensions in modern technological contexts influence purchase intentions. The findings enhance the understanding of the effective ways to alter Instagram

marketing information to improve millennials' purchase intentions.

1.3 Research Objectives

The arguments laid out above indicate that individuals are influenced by psychological factors attributed to motivations or reasoning, making them inclined to respond to a message, change, or adjust their intentions. Emotional connections are more influential than other factors (Zorfas & Leemon, 2016). Marketing psychology has incorporated psychological principles into brand marketing and sales strategy since it helps marketers understand their customers, what customers want, and what drives them to purchase. This success is acquired through the psychological phenomena of influencing and persuading people using various tools, predominantly technology, in the new millennium. For example, Starbucks has been using a psychological trigger to promote its brand by starting a social media campaign encouraging people to share the hashtag #Tweetacoffee, to have a free cup of coffee in return. By contrast, H&M used influencer marketing campaigns, and both companies noticed an increase in sales after their social media campaigns. Prior research investigated individuals' differences in response to persuasion technology based on personality traits, personal preference (Cialdini, 1998; Halko & Kientz, 2010), and differences among people's susceptibility to persuasion (Kaptein et al., 2009). Because people are persuaded through a message or set of information, the processing of information and perception is crucial. However, individuals' perceptions, information processing, and decision-making are complex phenomena; therefore, the information companies provide are essential in supporting decisions and the dynamics of an individual's purchase intentions.

Despite the tremendous academic and managerial attention persuasion and social media have gained through the years, most studies related to persuasive technologies examined the concept via computers and websites and sought persuasion

dimensions as strategies used to change behavior. Besides, research has focused on social media platforms as a means of social networking, engaging, and exchanging information. However, very little attention is paid to the quality of the information and materials provided by companies on their social media platforms and how individuals perceive the quality of this information due to susceptibility to persuasion. This study fills this gap by focusing on how individuals' susceptibility to persuasion, namely, reciprocity, commitment, social proof, authority, scarcity, and liking, influence their perception of the quality of online information provided by companies on their social media platforms and consequently their purchase intention. Thus, this study considers perceived information quality as a mediator between susceptibility to persuasion and purchase intention. Moreover, the study reflects the susceptibility to persuasion through Instagram.

Furthermore, research has shown that age has an important influence in several areas, including persuasive technology usage, usefulness, and ease of use of these technologies (Orji & Mandryk, 2014). The generational theory (Mannheim, 1952) identified different generations, namely the Greatest Generation G.I (1901–1924), Silent (1925–1942), Baby Boomer (1943–1960), Gen-X (1961–1981), millennials/ Gen-Y (1982–2002), and Gen-Z (2003–2010). However, no generation is more closely associated with technology and social media usage/exposure as the millennials (Ndubisi & Nataraajan, 2018). Thus, it is essential to consider millennials because they were born in the era of technology. This generation has not been widely explored in terms of their susceptibility to persuasion; therefore, the current study fills an important gap in the literature.

Consequently, the objectives of this study are as follows:

1. To examine the association between susceptibility to persuasion dimensions, namely (a) reciprocity, (b) commitment, (c) social proof, (d) authority, (e) scarcity, (f) liking, and perceived information quality among the millennial generation.
2. To evaluate the relationship between perceived information quality and purchase intentions.
3. To test the mediating effect of perceived information quality between persuasion dimensions of (a) reciprocity, (b) commitment, (c) social proof, (d) authority, (e) scarcity, and (f) liking and purchase intention.
4. To investigate the moderating effect of demographic variables, namely gender and education, on the relationship between persuasion dimensions and perceived information quality.

1.4 Research Methodology

The current study implemented a quantitative explanatory research methodology, using a self-administered survey. The questionnaire comprised measures that have been previously validated in the literature and were distributed electronically using Google Forms through email invitations in the English language. Data were collected using convenience sampling, generating 310 surveys, of which only 290 were usable. Then, the data were analyzed using SPSS. Chapter 3 provides a detailed discussion of the methodology.

1.5 Thesis Structure

This thesis consists of five chapters organized as follows: Chapter one introduces the topic, pinpoints the research objectives, research context, research contributions, and briefly explains the methodology used in this study. Chapter two presents the literature review of the related constructs, as well as the theoretical background underpinning the

conceptual model, the conceptual framework, and the hypothesis development. Chapter three discusses the research methodology in detail. Next, chapter four presents the data analysis procedures along with the study findings. Finally, chapter five concludes the thesis with theoretical and practical implications, the research conclusions, limitations, and future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The current research is grounded in previously established persuasion dimensions and two established theories: the ELM (Petty & Cacioppo, 1986) and the generation theory (Karl Mannheim, 1952). A conceptual model drawn from these theories is incorporated. The thesis examines six persuasion dimensions: reciprocity, commitment/consistency, authority, social proof, scarcity, and liking—on millennials' purchase intentions, along with testing the mediating effect of perceived information quality. The purpose of this chapter is to provide a theoretical background and to introduce the studied constructs, laying the foundation for what prior research established. The chapter contains four sections. The first section covers the background of the concepts and description of key constructs. The second section presents the theoretical framework, explaining the theories that clarify the associations in the proposed conceptual model. The third section provides the development of hypotheses and the rationale behind them, indeed considering the data illustrated in the previous three sections. The last section includes the proposed conceptual model portraying the chain of effects among the constructs.

2.2 Social Media and Social Media Marketing

Social media has drastically changed the way people share and receive information, communicate, and interact. The use of social media is increasing not only for current social networkers but also for business firms developing it as a way of advertising and marketing with less cost and effort (Kim & Ko, 2012). Through social media, companies can generate content, provide information about their products and services, and perform new marketing schemes. Notably, social media marketing is the use of social media platforms and channels to advertise and promote companies and their products and services (Akar & Topçu, 2011); it is a process that allows companies to

show their brand, products, and services through online channels. Therefore, marketing through social media is vital for companies, and it is used to increase their visibility and present their products and services (Akar & Topçu, 2011). According to Kim and Ko (2012), a study by Deiworldwide (2008) states that companies neglecting social media as part of their online marketing activities are losing the opportunity to engage and reach out to a numerous number of customers. Thus, brands need to focus on the value social media offers.

Theoretically, social media marketing has gained massive attention from scholars in different domains, such as the luxury brand sector (Godey et al., 2016), hospitality and tourism (Chan & Guillet, 2011; Hudson & Thal, 2013), airline industry (Seo & Park, 2018), and food industry (He, Zha, & Li, 2013). Such diversity shows that social media marketing is not constrained to only one sector. Additionally, Zhu and Chen (2015) argue that many products and services are suitable for social media marketing, products related to apparel and accessories, home essentials, decoration and garden, food and cooking, music and arts, vacations, and many other areas. Social media marketing can associate the experience with consumption effortlessly. Therefore, it is noticeable that big companies representing different domains such as IBM, Dell, Nike, Adidas, Dove, L'Oréal, Dominos, Burger King, and many more have successfully used and continue using social media in their marketing strategies.

Moreover, performing marketing activities through social media influences individuals in several ways. For example, Akar and Topçu (2011) found that 87% of consumers use social media sites, and such usage affects their attitudes concerning marketing with social media networks. Furthermore, new web technologies have made it easier for companies to distribute content and information that can be viewed by millions of people virtually, specifically through online media channels and social

media platforms. Social media platforms are becoming an essential element for companies (Chen et al., 2011), and company presence on online networks is becoming a fundamental part of marketing strategies due to its effectiveness (De Vries & Carlson, 2014; Gensler et al., 2013; Sokolova & Kefi, 2019). Thus, through the use of social media platforms, individuals' purchasing is more likely to increase. Consumers visiting social media sites reported better purchasing than those who did not visit the sites (DEI Worldwide, 2008).

Furthermore, social media usage is rapidly growing; in 2019, the number of people using social media worldwide reached 3.2 billion users (Emarsys, 2019). Besides, in 2018, the time spent by people on social media networks, on average, was 2 h and 22 min daily, and 54% of social browsers use it to research products and services (GlobalWebIndex, 2018), which implies that a significant portion of the vast usage of social media is to find a suitable product or service. Furthermore, third of the internet users, and even more, claimed they follow their preferred brands, whereas one in four users follow brands on social media from which they consider purchasing (GlobalWebIndex, 2018), signifying the importance of the information quality available online to attract customers to purchase. One of the most used new social media platforms is Instagram (i.e., a social media platform used for pictures and video posting). According to business.instagram.com, more than one billion Instagram accounts are active per month; 60% of users state that they discover new products on Instagram, 90% of users are following a business on Instagram, and more than 200 million users on Instagram daily visit at least one business account. Globally, outside of China, 63% are members of Instagram, 56% are brand followers, and 36% follow the brands they like (GlobalWebIndex, 2018). In addition, 71% of businesses in the US claim that they will be using Instagram in their business, whereas 80% of businesses

see Instagram engagement as a critical metric, and 7 out of 10 Instagram hashtags are branded (Mention, 2018). These results underscore the importance of using Instagram as a marketing tool to influence individuals' purchase intentions, precisely among technology generation.

Furthermore, the demographics of individuals performing online purchasing, such as age, are gaining attention. For instance, a study by GlobalWebIndex (2018) found that the highest percentages of Internet users who already purchased products online are individuals between the ages of 15 and 44 (74% of people aged 15–24, 80% aged 25–35, and 77% aged 35–44). This draws attention to one specific generation: Millennials (individuals born between 1982 and 2002). Millennials are distinct from others based on their intensive exposure to the Internet and technology from their earlier age (Bolton et al., 2013). Millennials use social media networks as a primary means of communication; thus, many sellers, advertisers, manufacturers, and retailers found that using those networks is an optimal way to reach out to millennials (Gangadharbatla, 2008; Jones et al., 2009; Pate & Adams, 2013). One of the most common social media platforms among millennials is Instagram; likewise, it is notably used extensively by companies as a marketing tool.

2.3 Millennials/ Technology Generation

Researchers suggest that millennials (i.e., young adults) witnessed the rise of universal association and access to acquire, send, and receive information at anytime and anywhere over multiple devices such as computers and smartphones (Conway et al., 2011). Millennials are keen to fit in, blend their identities with friends, create intimate mutual relationships, and willingly adjust and compromises for the sake of the relationship because they have entrenched their identities at this stage (Erikson, 1993; Erikson & Erikson, 1998; Ndubisi & Natarajan, 2018). One of the common

characteristics of the millennial generation is the tendency to establish a long-term commitment with others, devote to building relationships, and connect (Erikson & Erikson, 1998; Mannheim, 1952; Ndubisi & Natarajan, 2018) using technology. Millennials use various technologies, including the Internet and smartphones, which have become part of their life. This generation notably embraced new media more comprehensively than the older generation (Pitta, Kilian, Hennigs, & Langner, 2012). Thus, millennials have been granted terms such as the Net Generation (Opaschowski, 1999) and digital natives (Palfrey and Gasser, 2008; Prensky, 2001). Also, this generation is considered one of the essential ingredients in the development of e-commerce since it has been growing up socializing and purchasing online (Smith, 2011).

The appearance of social media platforms established a connected millennial generation; 96% of millennials are associated with at least one social network (Childs et al., 2009). Millennials use social media platforms more frequently than others; besides, they maintain significantly large networks and influences (Fromm & Garton, 2013). Millennials are “digital natives” born into a world of technology and new devices that empower them as consumers (Prensky, 2001); thus, it is essential to consider them in technology-related studies. Furthermore, this generation accesses digital media networks daily; they can communicate and purchase products from anywhere in the world. Their familiarity with digital media identified them as a driving force in online shopping (Smith, 2011). Millennials’ exposure to various digital marketing and since every website or online platform is trying to persuade its users of something (Horvath, 2011; Slattery, Simpson, & Utesheva, 2013), persuasion shapes a fundamental part of millennials Internet usage.

2.4 Persuasion and Persuasive Technology

Traditionally, persuasion is human-to-human interaction; however, the presence of technology created new forms of persuasion. Scholars over the years (e.g., Fogg & Nass, 1997; Nass et al., 1994) have provided evidence that people treat technological devices (e.g., computers and mobile phones) as social actors, which change attitudes and behaviors, including buying more products. Thus, interaction with technology advanced the implementation of social influence through technology devices. Moreover, interactive technologies can employ persuasion processes that humans do (Kaptein, 2012). Fogg (1997) introduced persuasive technology and defined it as a computing system or device designed to change people's behavior and attitudes in a prearranged way. Fogg also used the term "Captology" derived from Computers as Persuasive-ology, and identified the advantages of persuasive technologies over their traditional counterparts, such as radio spots and print ads; more persistent, greater anonymity with numerous data, various modalities to persuade, scale quickly, and reaches out where humans are not welcome or cannot be (Fogg, 2003). According to Oinas-Kukkonen and Harjumaa (2009), persuasive technologies can have a superior persuasion ability if the system is personalized (i.e., offering personalized content) or tailored (i.e., tailored to user interests, usage context, or needs). Users can be reached easily through the web, Internet, and mobile devices, which create greater prospects for persuasive interaction. Furthermore, persuasive technology can operate through either computer-human or computer-mediated persuasion (Oinas-Kukkonen & Harjumaa, 2009). However, technology adopters or distributors are the ones who intend to influence behavior (Fogg, 1998); those are marketers and managers implanting social media marketing. Similarly, people can be persuaded by computers or social network systems (e.g., social media platforms), serving the concept of computer-mediated

persuasion.

Accordingly, persuasive technologies carry behavior change using system-based or social influence and have gained attention in many areas, such as health, commerce, education, and fitness (Fogg & Fogg, 2003; Oyibo, Adaji, Orji, & Vassileva, 2018). Besides, the rise of the internet has led to the creation or design of websites for persuasion purposes; websites such as Amazon and New York Times are of the most common persuasive technology forms. However, beyond the websites, persuasive technologies have many forms, from mobile phones to goods and services. They were anticipated to expand beyond the primary application over the years and to primarily embrace advertising and marketing (Fogg & Fogg, 2003), and later spotted to be more compelling in the future because they are “always on” and more constant (Fogg & Eckles, 2007). The landscape grew rapidly, starting with educating the public and advancing into four primary application areas, gaining the attention of many scholars in marketing in addition to environmental management, health, and safety; however, persuasive marketing appears to be a step ahead in different domains (Kaptein, 2012). The implementation in the marketing context developed from participants concerning consumer behavior and psychology that is extending beyond traditional marketing.

2.5 Persuasion Dimensions

Dimensions, or principles, of persuasion are associated with persuasive technology as they motivate changing individuals' behaviors and attitudes. Overwhelming techniques are employed to persuade people or even to justify the persuasion. Of those are seven tools developed by Fogg (2003), extended to 28 by Oinas-Kukkonen (2009). Alternatively, among the oldest and most employed are the six persuasion principals developed by Cialdini (1993, 1994); effective and supported in the marketing literature (Payan & McFarland, 2005) and compelling in indirect agreements (Dijksterhuis et al.,

2005). According to Cialdini, some people can naturally capture an audience. Although these people cannot pass such skills to others, there is a way for executives to acquire them. Hence, persuasion works by engaging with and attracting the needs and drives of humans (Cialdini, 2001), meaning that people are susceptible to persuasion based on cognitive foundations. This section describes the six dimensions of persuasion by Robert Cialdini, supported with practical implications to draw a clear picture and contribute to a better understating of the principles.

2.5.1 Reciprocity

The reciprocity principle suggests that people feel obliged to return the favor based on what they received. Give people what you want to receive; the implication is to give first, such as giving free samples, positive experience, or information, then people will give something in return. One experiment by Garner (2005) verified that if sending sticky notes with a marketing survey persuaded people to respond to the survey, the results revealed that hand-written notes generated a 69% response rate. In the marketing context, the foundation is building relationships with individuals (e.g., sellers and buyers) through social grace or gestures of compliance.

Among the leading examples of reciprocity persuasion is the Surprise Mint case study presented in Cialdini's book titled "Influence: The Psychology of Persuasion"; the waiter tip increased by 3% after giving one free mint and by 14% after giving two mints. Apart from this, in the technology context, reciprocity is presented in the free trials offered from applications (e.g., Spotify, Office 365, and Moz.) Furthermore, in the social media context, reciprocity transformed in allowing users to express their opinions through reviews, rating brands, and sharing feedback.

2.5.2 Commitment/Consistency

Cialdini (2001) highlighted that people need to feel committed to what they are asked to do, which goes beyond affection and warm feelings toward an idea or even intention to purchase. One way to make people obligated is good turns; another is to gain public commitment; besides, individuals strive to sustain consistent beliefs and act accordingly (Cialdini, 2001). In other words, people strive for consistency with previous or even reported behaviors to fulfill harmony. Thus, when people notice an alignment between a persuasive request and previous behavior, they tend to adhere to the request as a way to justify the decision. This principle of commitment/consistency, as the strength of its phrase, identified to be self-enforcing (i.e., voluntary), explains that people will act according to what they said or publicly made (Pallak et al., 1980), or what they wrote (Werner et al., 1995). On the other hand, inconsistency is perceived negatively in society (Festinger, 1962).

2.5.3 Social Proof

Social proof suggests that people reference the behavior of other people around them as guidance to their own behavior. Cialdini (2001) supported social proof in citing several experiments, for instance, one conducted in 1982 in the *Journal of Applied Psychology*, in which researchers approached individuals to donate to a charity by presenting a list of the same community residents who had previously donated. The findings state that the longer the list, the more likely those individuals also donated. Further, two aspects power the principle of social proof: uncertainty (Wooten & Reed, 1998; Zitek & Hebl, 2007) and similarity (Platow et al., 2005). People are more likely to look at what other people do when the situation is unclear; they are also more inclined to adhere to similar individuals. In marketing, according to Cialdini (2001), science underpins what most marketers are already familiar with: the testimonials of satisfied

customers are superior when satisfied or prospective customers are sharing similar means. People are inclined to follow others precisely when they do not have all the necessary information to decide. Hence, the behavior of other people helps in making decisions, which means that most people are imitators and not initiators, which makes them observe other behaviors around them before deciding (Clark & Tennessee, 2008). Furthermore, individuals are influenced by the actions of multiple others sharing similar values or behaviors (Ajzen & Fishbein, 1980; Cialdini, 2004; Goldstein et al., 2008; Zhu & Zhang, 2010). Multiple studies have advanced in explaining the effectiveness of social proof, either by assuming that the applications of the social proof principle create informational influence (Cialdini, 2001; Hardin and Higgins, 1996) or observational effect (Asch, 1956).

2.5.4 Authority

Individuals' tendency to comply with others in the position of authority describes authority; it is based on the concept of believing an expert in different fields, such as professionals, doctors, and leaders. According to Cialdini (2006), three factors trigger the persuasion dimension of authority: clothes, titles, and trapping (Cialdini, 2006). Ordinary people tend to believe experts in the field they are observing. Thus, people are more likely to act following a claim that is made by someone who is highly knowledgeable (Clark & Tennessee, 2008). Individuals who are experts concerning the subject presented are more persuasive than those who are perceived as lacking expertise. (Baron & Branscombe, 2011). The literature supports authority; people typically do something when it comes from an authority figure (Blass, 1991; Milgram, 1974). Moreover, authority is sufficient due to the level of responsibility and the necessity of agreeing to an authority figure in social communities (Cialdini, 2001).

2.5.5 Scarcity

People want what they are scared to lose, as they give higher value to things in short supply, or assign a higher value for what they perceive as less available; thus, linking the scarcity principle with limited time and supply, or one of a type, is worthwhile. Scarcity is assumed to increase products' perceived value (Cialdini, 2001). Besides, emphasizing what people stand to earn in contrast to what they stand to waste if they do not respond to the information (Cialdini, 2001). This principle is derived from the belief that products or services with less availability are perceived as higher quality. Furthermore, some stimuli influence consumer behavior; people are more likely to buy a product or service that indicates scarcity, such as "today only" (Dijksterhuis et al., 2005). This could be because people are motivated by the idea of losing something rather than getting something of equal value (Hobfoll, 2001).

2.5.6 Liking

The principle of liking is straightforward—other people more likely persuade people that they like and tend to say "yes" to people they like, physically attractive, and people who compliment them. The nature of liking can be determined through factors including similarities, associations, and praise (Cialdini, 2001). Interpersonal similarity improves liking (Kaptein, 2012). Social media likes and followers are one example of liking; perhaps, people like and follow on social media based on the "mutual friends" or "followed by" view showing on their platforms.

2.6 Perceived Information Quality

Throughout the past few years, the Internet has been serving as an information exchange intermediate. Multiple scholars have declared that they are observing the rise of the online network community and that information technology is significantly influencing peoples' daily lives (Castells, 1996, 2001; Eriksson, 1999). Nowadays,

consumers are exposed to a massive amount of advertisements through mass media; this can be considered an excellent opportunity for both consumers to obtain information about the brand and the brand to reach out to broader consumers. However, with the enormous amount of information available online, consumers are seeking an easier way to decide on purchasing, and companies are seeking a better way to reach out to consumers.

Historically, information quality has gained massive attention in several domains, such as information systems, accounting, and marketing, and various definitions can be found in the literature. In the marketing literature, quality is defined as beyond meeting customers' expectations (Gronroos, 1983), putting customers first, and changing marketing from selling to communicating and involving customers (McKenna, 1991). Information is data subject to processing to provide value and benefits for users and organizations (O'Brien & Marakas, 2011). The concept of information quality is the usefulness of the available aspect information in supporting a decision toward evaluating the usefulness associated with an alternative (Keller & Staelin, 1987); it is the degree to which the information offers value to both users and companies (Chaffey & Wood, 2005), besides, group of characteristics including accuracy, inquiry, and completeness (Long, 2011). It includes dimensions such as comprehensiveness, clarity, and relevancy (Arazy, Nov, Patterson, & Yeo, 2011), credible, and understandable (Ashill & Jobber, 2001). Consequently, since companies aim to influence customers to generate more sales, they should provide customers with easy to process, clear, relevant, credible, and understandable information. People's judgments are not only influenced by the content of the relevance of the ap product or service information but then again by the ease with which one generates or processes this information (Schwarz, 2004; Petrova & Cialdini, 2005).

Generally, information on a specific content (e.g., nutrition, fashion) could be relevant to one person but not necessarily to another. As such, information receivers can vary in their ability and motivation to elaborate on an argument's fundamental merits, which in turn may limit to which degree a given influence process affects their attitude formation or attitude change (Bhattacharjee & Sanford, 2006). However, if the information received by consumers is clear and related to their needs and supports them in interpreting the product or service, then the information is more distinguishing, and as a result, will have a more significant opportunity of being adopted (Feldman & Lynch, 1988; Herr, Kardes, & Kim, 1991; Tsao & Hsieh, 2015). Receivers do not follow online information blindly; their prior beliefs and values matter; thus, recommendations and information that are inconsistent with values and beliefs may lead consumers to question its credibility (Baron & Branscombe, 2011). Therefore, online information should provide useful and high-quality information to the user (Chae et al., 2002).

2.7 Elaboration Likelihood Model (ELM)

The social psychology literature has examined the role of persuasion in influencing human perceptions and behavior using dual-process theories. These theories describe how people think of information while forming judgments and indicate that external information is the key driver of changing attitudes and subsequently changing behavior. The ELM is a dual-process theory of persuasion by Petty and Cacioppo (1986), which is the theory of interest in the current study. The term "elaboration" is employed to suggest that beyond the simple meaning of the information provided, people include something of their own in the information provided (Bhattacharjee & Sanford, 2006; Petty & Wegener, 1999). The theory's core suggests two alternative processes of attitude formation: social judgments are based on either effortful or less effortful

processing of information. ELM has been widely used in social psychology (e.g., Petty & Cacioppo, 1986; Petty et al., 1981; Petty et al., 1995) and marketing (e.g., Lord et al., 1995) research (Bhattacharjee & Sanford, 2006).

ELM proposes that a cognitive event is a primary interpretation of persuasion, meaning that the audience of the persuasive message relies on mental and psychological processes of motivations and/or reasoning to react to the persuasive message. ELM suggests two routes of influence: the central route, which involves persuasion with the content of the message (i.e., rational and proof of the argument), the audience should have the motivation and ability to adhere to the message, and the peripheral route, which occurs when the receiver lacks motivation and ability to process the message and involves persuasion through sentiments and emotional involvement. Salespeople and marketers who want to change attitudes prefer to use the peripheral route since it is easier to change attitudes when involved in heuristic processing rather than engaging in more systematic processing (Baron & Branscombe, 2011). The current study primarily follows the ELM, which better clarifies the six persuasion principles (Cialdini, 1993, 1994) that specifically indicate the peripheral route. The peripheral route occurs because individuals link the issue to either negative (e.g., unattractive source) or positive (e.g., expert is the source) cues; however, it does not require extensive engagement with the message argument and individuals may agree with the message to variable degrees based on their perception from the information presented (Petty, 1984). This link of the six persuasion principles and the perception of information quality with purchase intention is better clarified through the lens of ELM.

2.8 The Generation Theory

Another theoretical lens that partially frames the current study is the generation theory developed by Karl Mannheim (1952). According to the generation theory, generation

association is based on the mutual position of an age group in historical time. Members of generations are born, begin school, go into the workforce, have children, and then retire at about the same age and period. Besides, these members of a generation are the same age when wars are waged, technological advances are made, and other social changes occur (Mannheim, 1952). The theory suggests that “socio-historical” settings and notable events influence people, and it categorizes people based on age. It is critical to understand the concept of a generation because the movement and the flow of generations linked with historical and social events guide social change; this process is described as “demographic metabolism” (Kowske, Rasch, & Wiley, 2010; Ryder, 1965). Social forces such as friends and family, traditions, and social norms familiarize the newborn generation with society. Altogether, new generations also form their own unique characteristics. The unique characteristics of generations impact social forces and lead to societal change (Mannheim, 1952; Ryder, 1965). Research empirically supports that individuals at a particular developmental stage interpret and explain historical events differently than that of one another, whereas young adulthood is a particularly impressionable developmental stage (Duncan & Agronick, 1995; Kowske, Rasch, & Wiley, 2010; Noble & Schewe, 2003). This young adulthood stage is considered a critical time for forming the generational identity (Mannheim, 1952; Ryder, 1965).

Although there is no precise agreement on the calendar years, theories advanced the following generations since the start of the last century: greatest generation (1901–1924), silent generation (1925–1942), baby boomers (1943–1960), gen-X (1961–1981), millennials/gen-Y (1982–2002), and gen-Z (2003–2010). Moreover, the millennials at present are young adults—i.e., between 20 and 39 years old (Erikson, 1993; Erikson and Erikson, 1998). This psychological development stage corresponds to the

millennial age category of Mannheim's theory of generation (Ndubisi & Natarajan, 2018). Although millennials are an attractive segment for marketers and advertisers, they remain poorly understood, particularly their marketing relationships, perceptions, and responses, and there is a lack of studies on this segment (Ndubisi & Natarajan, 2018). Generation theory considers a psychosocial approach relating to social factors, as well as individuals' thoughts and behaviors. Many scholars (e.g., Kowske, Rasch, & Wiley, 2010; Ndubisi & Natarajan, 2018) have remarked on the importance of this segment and the detrimental effect of ignoring them by both researchers and practitioners alike. Therefore, it is worthy of understanding millennials' susceptibility to persuasion and how it relates to information quality perception and purchase intentions.

2.9 Hypotheses Development

2.9.1 Reciprocity and perceived information quality

The reciprocity social influence principle is remarkably active when implemented accurately (Kaptein, 2012), precisely when the favor is given without further expectations in return. Thus, giving consumers something useful or valuable may result in a purchase increase. Cialdini (2001) mentioned that a purchasing manager, in 1996, admitted that after receiving a gift from a supplier, their firm was willing to buy what they have otherwise may be declined; thus, reciprocity affects purchase intention. Moreover, Wang and Fesenmaier (2002) argued that in the online community, reciprocity of information among community members is one of the core attributes; people being in the right place, whether physical or online, fulfill a psychological need. The connection among people in online communities, along with the feeling of reciprocity—obligations and anticipations of others' behaviors—is significant in creating connections. The same concept may apply to the relationship between brands

and customers; in other words, companies create connections with the audience by tapping into people's psychological needs; precisely, the desire for equilibrium and maintain balance by offering valuable information for consumers to fulfill reciprocity. The revolution of information technology is a motive for reciprocity's increased consequences because it makes the firm's "image profile" more worthwhile (Palmer, 2000). According to Cialdini (2001), people are more likely to pay attention to a product's features when they receive a free or unexpected gift, which need not be an expensive or even a material gift: information works too. Indeed, reciprocity can be achieved by providing valuable information for customers, entertainment, and product-related guidance. When the senders show the pure intention of communicating a message, they can trigger the inherent commitment while receiving a gift (Cialdini, 2001). Thus, an individual's susceptibility to reciprocity is associated with the quality of information companies offer on social media platforms, namely, Instagram, similarly with millennials because they actively use social media platforms to search for products or services; thus, the following is hypothesized:

***H1:** There is a significant positive relationship between individuals' susceptibility to reciprocity and perceived information quality.*

2.9.2 Commitment/consistency and perceived information quality

People strive for consistency in their commitments (Cialdini, 2001). People also prefer preexisting actions and attitudes and even values. On the other hand, inconsistent behavior can be seen as a negative trait by individuals and society (Festinger, 1962; Slattery, Simpson, & Utesheva, 2013). Hence, people purchase certain brands based on commitment and consistency. For example, purchasing a new mobile phone of the same brand demonstrates commitment and consistency. Moreover, creating a list of products people desire or intend to purchase makes them physiologically committed to

purchasing, such as online shopping sources allowing people to add items to their cart or wish list. Moreover, an example of this principle as a form of commitment is entering an email address when visiting the company's online source; this is meant to make people see themselves as customers of the company, which may raise the possibility to purchase. Hence, commitment and consistency affect purchase intention.

In addition, getting customers to make a small commitment to brands, such as following their social media account on Instagram, will more likely make them consider the purchase. Thus, the key is to create commitment; this can be achieved through the quality of the information provided to influence people. When people agree with the information, it makes them more committed to an action. Cialdini (2001) mentioned that asking people (e.g., will you please call?) instead of telling them (e.g., please call) how to act gets them to agree with the message and results in committed to action. Thus, the information provided matters; according to Frey (1986, 1981), people favor information specifically consistent with their decisions and self-serving assumptions; likewise, among millennials. This implies the link between susceptibility to commitment and perception of information quality, leading to the following hypothesis:

H2: There is a significant positive relationship between individuals' susceptibility to commitment and perceived information quality.

2.9.3 Social proof and perceived information quality

There are two types of social influence that might have a short- or long-term impact on individuals. The first type is normative social influence, which happens when individuals conform to specific norms to be accepted by others (Deutsch & Gerard, 1955; Pettigrew, 1991; Zeitek & Hebl, 2007). The second type is informational social influence, which occurs when individuals use other people as a source of accurate information and subsequently agree with other people's views (Campbell & Fairey,

1989; Cialdini & Trost, 1998; Deutsch & Gerard, 1955; Zitek & Hebl, 2007). The latter is more likely to have long-term changes in people's opinions (Campbell & Fairey, 1989; Eagly & Chaiken, 1993; Kaplan & Miller, 1987; Nail, 1986; Zitek & Hebl, 2007). Thus, people base their beliefs on others' information, whom they believe have more expertise in a specific area or even friends, family, and people in their social network. Social proof as an informational social influence, described as an influence to accept information acquired from others as evidence about reality (Deutsch & Gerard, 1955). Marketers use the principle of social proof by notifying people that the product is a "best seller" by showing a positive assessment of the product (Kaptein & Eckles, 2012). A study by Jeong and Kwon (2012) found that purchase intention was higher for respondents who were disclosing to an online popularity claim than those who were not, which represented 94% of participants who bought a product subsequently to view the company's online site. Additionally, multiple worldwide companies use social proof; for example, Amazon uses testimonials by allowing users to see the majority of purchasers and their level of satisfaction. Providing information about the customers' testimonials to the target audience shows that similar people relish the product or service, and people will be more likely to become customers. Cisco used celebrity endorsement to add storytelling, while Netflix suggested to users new TV shows and movies based on trends and popularity. Additionally, Booking.com uses phrases such as "Booked 10 times", or "8 people are now looking at this property". Hence, quality information showcasing users, celebrities, experts, or similar others has a crucial role in the psychological phenomena wherein individuals attempt to follow the actions and behavior of others. Likewise, millennials use Instagram accounts because they embrace social proof. Accordingly, the link between millennials' susceptibility to social proof and perceived information quality is significant, which forms the following hypothesis:

H3: *There is a significant positive relationship between individuals' susceptibility to social proof and perceived information quality.*

2.9.4 Authority and perceived information quality

People are vulnerable to authority by showing agreement with the behavior offered. Authority is used in various forms, ranging from TV shows to influence people (e.g., the Doctors talk show: presenting medical professionals discussing health care–related tips) to social media aspects to increase brand outreach (e.g., Smashbox, a cosmetic brand, used authority figures and beauty experts wearing their products).

Regarding millennials, the information provided by an authority figure has a significant influence, and they are more likely to show trust in authority figures, and they are more likely to accept authority in comparison with other generations (Hershatter & Epstein, 2006). When millennials are hesitant, they search for information to monitor their decisions. In the technology world, the information search occurs by social media platforms such as Instagram; the source (e.g., an authority figure) of the information affects millennials' adherence to the message, thus their perception of the quality of the information provided, casting the following hypothesis:

H4: *There is a significant positive relationship between individuals' susceptibility to authority and perceived information quality.*

2.9.5 Scarcity and perceived information quality

Multiple scholars have explained the effectiveness of scarcity through traits such as the need for uniqueness (Fromkin, 1970; Snyder & Fromkin, 1980) or based on theories such as personal equity and dissonance theories (Seta & Seta, 1982; Festinger, 1957). The literature supports that scarcity will constructively influence individuals and will boost the possibility of purchase (West, 1975; Inman et al., 1997; Eisend, 2008). Besides, scarcity has a significant positive effect on purchase intention (Fenko,

Keizer, & Pruyn, 2017). A study conducted on wholesale beef buyers indicated that they purchased more than double the quantities once told that foreign weather conditions might affect the foreign beef supply, due to their scarcity of losing the product. (Knishinsky, 1982; Cialdini, 2001). Besides, airline companies largely use scarcity by informing users of the number of seats left. Furthermore, Cialdini (2001) argued that widely available information is less persuasive than exclusive information. Exclusivity has persuasive power and gives the information a unique sheen (Cialdini, 2001). When Facebook first launched its social media network, and before making it available to the public, only a limited number of users created an account, mainly Ivy League schools (e.g., Harvard, Yale, and Stanford). Nevertheless, the significance of their growth occurred initially from exclusivity, which is a differentiator among competitors. Nowadays, Instagram, a new social media platform owned by Facebook, presents comparable information. Perhaps the information provided by companies follows the physiological influence of scarcity; a similar influence might occur among millennials. Accordingly, millennials susceptibility to scarcity affects their perception of information quality, as reflected in the following hypothesis:

***H5:** There is a significant positive relationship between individuals' susceptibility to scarcity and perceived information quality.*

2.9.6 Liking and perceived information quality

Liking could help in absorbing the information received well. Several studies present overwhelming evidence of the liking principle; the simplest and more traditional one is the Tupperware party, later organized as a “demonstration” party, in which a host invites a group of people and shows them various containers to purchase. Guests liking for their host translated as twice as heavily in purchasing the product, concerning what they bought. This means that when guests purchase decisions, it is for the sake of

pleasing themselves as well as their host (Jonathan Frenzen & Harry Davis, 1990; Cialdini, 2001). Consequently, people agree with others they like, similar to others, physically attractive people, or people who compliment them. The same concept is virtually equivalent, namely making the company's Instagram account physically attractive (i.e., with the overall design), complimenting with writing comments, or providing information about similar others. Presenting information by honestly reporting to what extent the product or service, is similar to the audience and familiar with their challenges and preferences. Such influence could be realized by providing information about the products and services; thus, the quality of this information is core. The concept could expect a similar application to millennials; accordingly, millennials' susceptibility to the liking principle could have a key role in how they perceived the information quality. Thus, hypothesizing the following:

H6: There is a significant positive relationship between individuals' susceptibility to liking and perceived information quality.

2.9.7 Mediating effect of perceived information quality

Purchase intention is an essential concept in marketing (Morrison, 1979), and researchers investigated the relationship between purchase intention and purchase behavior and found it to be a reliable measure of consumer purchase behavior (Kalwani & Silk, 1982). A model presented by Engel, Blackwell, and Miniard (1968) on consumer intention to purchase decisions divides the process into the following five phases: first, people recognize a problem, second, they search for information, third, they evaluate the alternatives, fourth, they decide on the purchase, and finally comes the post purchase behavior. As argued during the second phase, the search for information, the perceived information quality plays a role in purchasing. Thus, the way people perceive the quality of information available online affects their purchase

intention. Consumers' purchase decisions can be established based on principles that meet their needs and desires, as for the willingness for consumers to purchase, it is determined based on their perception of the received information quality (Cheung, 2008). Consumer purchase decisions on the Internet are not based on actual experiences but appearances, such as information quality, as well as pictures and images (Lohse & Spiller, 1998; Kolesar & Galbraith, 2000). Therefore, adopting high-quality information is essential. High-quality information found online results in a better purchase decision (Peterson et al., 1997). Information on an online store, the quality of the information, significantly affects consumers' purchase behavior; further, products and services online information quality is a crucial feature that influences individuals while searching and purchasing online (Park & Kim, 2003).

Additionally, Kim and Stoel (2004) studied online shopping intention in clothing and online apparel and found information quality to be the most significant predictor, stressing the importance of appropriate and sufficient information in increasing online sales. Besides, the authors argued that although providing information on apparel is difficult, since the product is considered in the high-touch category, apparel vendors were able to find ways to substitute the sensory experiences, such as offering product information (Park & Stoel, 2005), of that information is the fabric describes and measurements (Kim & Stoel, 2004). Furthermore, the quality of online information for apparel can be improved by providing accurate virtual and images, which are also found to be important in the apparel industry (Kim & Stoel, 2004). The related application applies to other industries, varying from durable or nondurable goods. Moreover, visuals have been found to improve information and to support the information density (PWC, 2017); thus, the overwhelming currently used social media platforms can help to improve and influence the company's conveyance of online

information. Instagram is centralized on photo and video sharing, supporting the information with visuals and therefore affecting its quality. Similarly, because millennials are massively using social media platforms (e.g., Instagram), the quality of the information provided by companies affects their purchase intention. Furthermore, it can be concluded that perceived information quality explains the relationship between millennials' susceptibility to persuasion and their intention to purchase a product or service on Instagram. Accordingly, the paper cast the following hypotheses:

H7: *There is a significant positive relationship between perceived information quality and purchase intention.*

H8: *Perceived information quality mediates the relationship between an individual's susceptibility to persuasion – namely (a) reciprocity, (b) commitment, (c) social proof, (d) authority, (e) scarcity, and (f) liking and purchase intention.*

2.9.8 Moderating effect of demographic variables

Attention to demographic traits is vital since people's specific characteristics help brands in assessing behaviors. Because of the unique nature of an individual's characteristics, the strength of the relationship between persuasion dimensions and perceived quality may depend on their demographical differences. Empirical evidence supports gender differences in an individual's decision-making process (Ndubisi, 2006). Research shows that there is a difference between males and females in various areas, including emotional expression (Deaux, 1985; Kring and Gordon, 1998; Ndubisi, 2006), financial decision-making (Powell and Ansic, 1997; Ndubisi, 2006), and communication or conversational style (Tannen, 1995; Ndubisi, 2006). As such, males and females may evaluate information differently, including its credibility, clarity, understandability, helpfulness, and sufficiency. Furthermore, studies indicate a gender difference in response to using the Internet as a tool to shop (e.g., Teo, 2001, Doolin et

al., 2005), whereas men are more frequently to purchase online. However, drivers of purchase may differ among genders; women can accentuate psychological emotions in the purchasing process, whereas men can underline more efficiency and convenience during the purchasing process (Jen-Hung & Yi-Chun, 2010). Moreover, information quality is relative, meaning that information that can be appealing to one user is not necessarily appealing to another. Perceiving information quality could depend on the characteristics of the decision-makers. Hence, it should be taken into consideration. As such, the level of education could influence people's perceptions of information quality. Research provides empirical evidence linking critical thinking with education (Carey, 1985; Brown & DeLoache, 1978). More educated people may be involved in in-depth critical thinking, and since information seeking and analysis is one component of critical thinking, the quality of this information should be high to meet their expectations. Consequently, demographic differences play a key role in perceiving information quality.

Also, demographic traits such as gender and education level can predict susceptibility to persuasion (Halko & Kientz, 2010; Orji & Mandryk, 2014; Khaled, 2006; Orji, 2013). On the basis of these differences, this research integrates buyers' demographic characteristics, namely, gender and educational level, and assesses how these factors affect the relationship between persuasion dimensions and perceived information quality. The current study proposes that demographic variables will significantly impact the relationship between the persuasion dimensions and perceived information quality similarly expected with millennials; thus, the study hypothesized the following:

H9: There is a significant moderating effect from gender in the relationship between susceptibility to persuasion and perceived information quality.

H10: There is a significant moderating effect from education in the relationship between susceptibility to persuasion and perceived information quality.

2.10 Conceptual Framework

Several researchers investigated individuals' differences in response to persuasion technology based on personality traits, personal preference (Halko & Kientz, 2010; Cialdini, 1998), and differences among people toward susceptibility to persuasion (Kaptein et al., 2009). Moreover, many studies have advanced our understanding of the relationship between Cialdini's persuasion dimensions. However, there is no other research examining the role of perceived information quality in the mediation of the relationship between susceptibility to persuasion precisely through the six persuasion principles and purchase intention among millennials. Therefore, the study posits that people who are susceptible to persuasion can be attracted to patronize a specific brand through the mediation role of perceived information quality.

The conceptual model portrays the chain of effects from reciprocity, commitment/consistency, social proof, authority, scarcity, and liking to individuals' perception of the quality of information, and then to purchase intention because the six principles affect purchase intention, as highlighted earlier. However, the link between persuasion principles and purchase intention through perceived information quality can be an alternative path to advance the existing literature. People who are susceptible to persuasion are more likely to adhere to the information provided by companies. With millennials, a similar relationship can be found, precisely when the information is delivered through technology devices, strictly social media platforms such as Instagram. Finally, the conceptual model depicts demographic variables; gender and education levels influence the relationship between susceptibility to persuasion and perception of information quality.

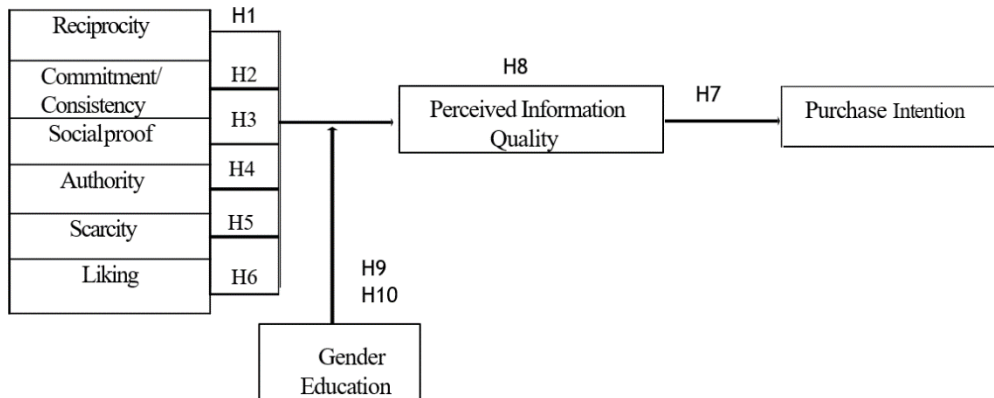


Figure 1. Proposed research model

CHAPTER 3: METHODOLOGY

3.1 Introduction

The previous chapter discussed the literature review of the related constructs and developed the research hypotheses. The current chapter discusses the research design and explains the study's methodology, including the methods used to examine the hypothesized relationships. The chapter first discusses the research type, followed by a detailed discussion of the measurements used and the questionnaire design. Next, the chapter presents the research context and geographic setting, proceeding with the sampling, and finally, the data analysis techniques.

3.2 Research Type

This paper aims to examine millennials' physiological ability to be influenced considering multiple variables, counting the six persuasion dimensions developed by Robert Cialdini (1993, 1994), namely, (1) reciprocity, (2) commitment/consistency, (3) social proof, (4) authority, (5) scarcity, and (6) liking, wherein these six dimensions have been observed as independent variables. For each independent variable, the direct effect on perceived information quality has been examined. Moreover, this study introduced perceived information quality to clarify the relationship between persuasion dimensions and purchase intention; in other words, it examined the mediation effect of perceived information quality between the previously mentioned independent variables and the dependent variable (i.e., purchase intention). Furthermore, the direct effect of perceived information quality and purchase intention has been examined. Finally, the moderating effect of two demographic variables (i.e., gender and education) on the relationship between persuasion dimensions and perceived information quality; and perceived information quality and purchase intentions. This research is directed by a conceptual framework that examines the

causal relationships between the constructs; thus, the causal relationship between independent and dependent variables has been tested, and the quantitative approach is adopted since this study aims to investigate what causes favorable outcomes linked to perceived information quality and purchase intentions based on the effect of persuasion dimensions. Quantitative research assumes a mutual objective reality among individuals, and it is used when the research is based on a theory or a hypothesis, tests the verification or otherwise of the proposed hypothesis, and tends to highlight a common reality that people may agree on (Newman & Benz, 1998).

In quantitative research, there are two predominant research designs: experimental and survey-based. This paper adopted the survey design to identify relationships between variables since surveys occurred in naturalistic settings and were obtained from a significant random sample, allowing more robust conclusions and stronger generalizability (Allen, Titsworth, & Hunt, 2008). The survey-based design can be either exploratory or explanatory, depending on the research objectives. The former is less structured than the latter, and its main objective is to identify research tasks, hypotheses, questions, and gain familiarity with the data. However, explanatory research deals with specific research questions investigating the relationships between the variables and tests how one variable produces changes in another (Cooper & Schindler, 2014). This research is an explanatory survey-based study since it explains one or more hypothesized relationships and examines constructs that depend on existing theories (i.e., ELM and generation theory), wherein the constructs have been well established in the literature. The results aim to contribute to the theory development and the current literature.

3.3 Measurements and Questionnaire Design

A self-administered questionnaire was employed regarding the data collection. The foundation of the survey was derived from the literature and preexisting scales that have been previously validated in the literature. Previously validated items were adapted from the literature to ensure acceptable internal consistency. The survey was reviewed by the researcher and thesis supervisor and was subject to minor adjustments and replacing some terms before it was distributed. The final version of the questionnaire was created using Google Forms. Although the common languages in the State of Qatar are both Arabic and English, the survey was only distributed in English to eliminate language-related issues.

The questionnaire involved four sections with 46 items, measuring eight constructs. The first section contained questions related to persuasion constructs. Many measurement scales have been developed to stimulate peoples' perceptivity to persuasion through the years. Susceptibility to Persuasive Strategies (STPS) established by Kaptein et al. (2009) is one of the most used scales. STPS was used to measure susceptibility to persuasion in this study, wherein 12 items of STPS were described by Kaptein et al. (2009) in addition to 20 items added to the scale by Kaptein, Ruyter, Markopoulos, and Aarts (2012). The 32 items were as follows: reciprocity, five items; commitment/consistency, six items; social proof, five items; authority, six items; scarcity, five items; and liking, five items.

The second and third sections were headed with an introduction asking participants to consider companies' information/materials about their products/services on the Instagram platform. The second section contained questions about the perceived information quality construct, with six items adapted from Park and colleagues (2007) and Bailey and Pearson (1983). The third section included questions regarding the

purchase intention construct with five items adapted from a study by Baker and Churchill (1977). Finally, section four covered three items for demographic variables: gender, age, and higher educational qualification. All items in the questionnaire were measured on a 7-point scale ranging from 1 (“very strongly disagree”) to 7 (“very strongly agree”).” Along with the survey, a consent letter was sent to the participants with a brief explanation of the study purpose, participation criteria, and confidential protection.

On the basis of the developed hypotheses in this research and the study variables, Table 1 below maps the measurements and the data used in each variable, as well as the sources.

Table 1. Measurements and Sources

Hypotheses	Variables	Items	Source
H1: There is a significant positive relationship between susceptibility to reciprocity, and perceived information quality.	Reciprocity (Independent variable)	When a family member does me a favor, I am very inclined to return this favor. I always pay back a favor. If someone does something for me, I try to do something of similar value to repay the favor. When I receive a gift, I feel obliged to return a gift. When someone helps me with my work, I try to pay them back	(Kaptein, Ruyter, Markopoulos & Aarts, 2012)
H2: There is a significant positive relationship between susceptibility to commitment/consistency, and perceived information quality.	Commitment/Consistency (Independent variable)	Whenever I commit to an appointment, I always follow through. I try to do everything I have promised to do. When I make plans, I commit to them by writing them down. Telling friends about my future plans helps me to carry them out. Once I have committed to do something, I will surely do it. If I miss an appointment, I always make it up.	(Kaptein, Ruyter, Markopoulos & Aarts, 2012)
H3: There is a significant positive relationship between susceptibility to social proof, and perceived information quality	Social proof (Independent variable)	If someone from my social network recommends a product, I tend to try it. When I am in a new situation, I look at others to see what I should do. I will do something as long as I know there are others doing it too. I often rely on other people to know what I should do. It is important to me to fit in.	(Kaptein, Ruyter, Markopoulos & Aarts, 2012)

Hypotheses	Variables	Items	Source
H4: There is a significant positive relationship between susceptibility to authority, and perceived information quality.	Authority (Independent variable)	<p>I always follow advice from experts.</p> <p>When a professional tells me something, I tend to believe it is true.</p> <p>I am very inclined to listen to authority figures.</p> <p>I always obey directions from my superiors.</p> <p>I am more inclined to listen to an authority figure than a peer.</p> <p>I am more likely to do something if told, than when asked.</p>	(Kaptein, Ruyter, Markopoulos & Aarts, 2012)
H5: There is a significant positive relationship between susceptibility to scarcity, and perceived information quality.	Scarcity (Independent variable)	<p>I believe rare (scarce) products are more valuable than mass products.</p> <p>When my favorite shop is about to close, I would visit it since it is my last chance.</p> <p>I would feel good if I was the last person to be able to buy something.</p> <p>When my favorite brand is almost out of stock, I buy two.</p> <p>Products that are hard to get represent a special value.</p>	(Kaptein, Ruyter, Markopoulos & Aarts, 2012)
H6: There is a significant positive relationship between susceptibility to liking, and perceived information quality.	Liking (Independent variable)	<p>I like to take advice from my social network.</p> <p>When I like someone, I am more inclined to believe him or her.</p> <p>I will do a favor for people that I like.</p> <p>The opinions of friends are more important than the opinions of others.</p> <p>If I am unsure, I will usually side with someone I like.</p>	(Kaptein, Ruyter, Markopoulos & Aarts, 2012)

Hypotheses	Variables	Items	Source
H7: There is a significant positive relationship between perceived information quality, and purchase intention.	Purchase intention (Dependent variable)	<p>After reading online information/materials provided by a company on Instagram it makes me desire to purchase the product/service.</p> <p>I intend to seek products who's information/materials are provided on my own Instagram social network.</p> <p>I intend to visit the company's page on Instagram after reading the information/materials provided by them.</p> <p>In the future, I may consider the company featured on my Instagram social network as my first choice.</p> <p>I will consider buying the product after I have read online information/materials provided by the company.</p>	(Baker & Churchill, 1977)
H8: Perceived information quality mediates the relationship between susceptibility to (a) reciprocity, (b) commitment/consistency, (c) social proof, (d) authority, (e) scarcity, and (f) liking and purchase intention.	Perceived information quality (Mediator)	<p>Information/materials provided by the company on Instagram are clear.</p> <p>Information/materials provided by the company on Instagram are understandable.</p> <p>Information/materials provided by the company on Instagram are helpful.</p> <p>Information/materials provided by the company on Instagram are credible.</p> <p>Information/materials provided by the company on Instagram have sufficient reasons supporting the opinions.</p> <p>In general, the quality of information/materials provided by companies on Instagram is high.</p>	(Park et al., 2007; Bailey & Pearson, 1983)
H9: There is a significant moderating effect of gender in the relationship between susceptibility to persuasion and perceived information quality.	Demographic variables (Moderators)		

Hypotheses	Variables	Items
H10: There is a significant moderating effect of education in the relationship between susceptibility to persuasion and perceived information quality.		

3.4 Research Context and Geographic Setting

The unit of analysis is individuals (males and females) owning an Instagram account, and the research context is millennials in the State of Qatar. According to Global Digital Insights (2019), among the 2.72 million total population in Qatar, 2.69 million people are active mobile social media users, representing 99% of the total population. Social media platforms usage is growing rapidly, and the second most used platform after Facebook is Instagram with monthly active users' rate of 930.0 thousand (Digital Marketing Community, 2019). Although Facebook has more active users than other social media platforms (e.g., Instagram, Twitter, Snapchat), Instagram is the fastest growing social media platform in Qatar with a quarterly growth rate of 6.9% in total monthly active advertising audience (Digital Marketing Community, 2019). On the other hand, Twitter's quarterly growth rate is 5%, Snapchat -15%, and Facebook 0%, according to Global Digital Insights (2019). These numbers demonstrate the growing importance of Instagram and its substantial future potential, both compelling reasons to pay attention to Instagram as a new tool for companies' marketing activities.

Moreover, it is observed that many new companies are using Instagram to reach out to customers in Qatar, consequently influencing individuals, more specifically, millennials, who are the technology generation. In Qatar, around 1.33 million are between the ages of 20 and 39 (CIA World Factbook, 2019). Besides, Qatar has a prominent percentage of young adults due to suitable work and life conditions, making it geographically attractive for conducting research related to this age group. Indeed, all the factors mentioned above point to the significance of studying millennials' susceptibility to persuasion, Instagram as a means of companies' exposure, and millennials' purchase

intention concerning their perception of what information companies offer.

In this study, an online -administered survey was developed and distributed to the subjects. Unlike the standardized interviews, data collection through an online-administered survey occurs with the absence of an interviewer/researcher (De Leeuw, 2008). The survey was created in an electronic format using Google Forms, and the link was distributed using the convenience sampling method explained in the following section.

3.5 Sampling

Data were collected using the convenience sampling technique, a type of non-probability sampling. Convenience sampling is nonrandom sampling where subjects of the target population that meet specific criteria are included in the study. These criteria include easy accessibility, the subject's willingness to participate, and availability (Dörnyei 2007; Etikan et al. 2016). Convenience sampling is the most commonly used sampling method (Acharya et al., 2013), where participants are selected based on convenience. The questionnaire was electronically sent to the researcher's colleagues and classmates, students pursuing their graduate studies, and staff from different departments at Qatar University. Likewise, the questionnaire was distributed through the researcher's social network and Instagram users' contact list.

Respondents were informed before proceeding with the questionnaire that participation is voluntary, and they were notified about the purpose of the research, as well as their ability to withdraw from the study at any time. Besides, participants were assured full confidentiality of their responses. The inclusion criteria included males and females living in the State of Qatar, owning an Instagram account, and between the ages of 20 and 39 years.

There has been no agreement on a specific number of ideal sample size (MacCallum et al., 1999), and many researchers debated the appropriate sample size for research. For example, Kline (1979) suggested that a minimum of 100 is the optimal sample size; on the other hand, according to Cattell (1978), not less than 250 should be collected. The total sample size obtained from the data collection was 310, which is sufficient for the multivariate analysis applied in the study. Out of the 310 responses, 290 were usable. The remaining 20 responses were eliminated because they were incomplete or did not fall within the age group required in the study (i.e., 20 to 39 years old). Thus, a total of 290 responses were analyzed, which is considered an adequate sample size since it is following the sample size as similar studies. According to Israel (1992), a literature review in the same discipline can provide direction regarding the “typical” sample size to use. Moreover, most studies call the ratio of a sample size to variables to be at least ten observations per variable (e.g., Osborne & Costello 2004; Westland, 2010). The current study includes eight variables; henceforth, the sample size is adequate.

3.6 Data Analysis Methods

The collected data were transferred to SPSS from Google Forms; next, they were prepared for analysis by coding and revising the data. Three data analysis procedures were employed: descriptive, reliability, and regression. The frequencies of the demographic variables were calculated and analyzed to present the participants’ profiles—besides, measurements of central tendency for each construct were tested. The Cronbach’s α of internal consistency was calculated to assess the variables’ reliability. To analyze the direct effect of persuasion dimensions on perceived information quality, multiple regression was calculated. Moreover, hierarchical multiple regression was calculated to examine the

mediating effect of perceived information quality, as well as the moderating effect of gender and education on the association between persuasion dimensions and perceived information quality.

The mediating effect of perceived information quality was evaluated based on Baron and Kenney's (1986) recommendations, and recently, Ndubisi and Natarrajan (2018). According to Baron and Kenny (1986), variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator (i.e., Path a), (b) variations in the mediator significantly account for variations in the dependent variable (i.e., Path b), and (c) when Paths a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant. If Z is the dependent variable, X is the independent variable, and Y is the intervening variable:

$$Z = f(X) = a + bX,$$

$$Y = f(X) = c + dX$$

$$Z = f(Y) = e + fY,$$

$$Z = f(X, Y) = g + hX + jY$$

Full effect:

$$* b \neq 0$$

$$* d \neq 0$$

$$* f \neq 0 \text{ also } j \neq 0$$

$$* h = 0$$

Partial effect:

$$* b \neq 0$$

$$* d \neq 0$$

$$* f \neq 0 \text{ also } j \neq 0$$

$$* h \neq 0 \text{ but } h < b$$

Finally, the moderating effect of gender and education on the relationship between persuasion dimensions and perceived information quality was analyzed following Jaccard, Turrisi, and Wan (1990) style, and more recently Ndubisi (2006). The first stage introduces the independent dimensions (persuasion dimensions) into the regression model. In the

second stage, the moderator (gender/education) was introduced. In the third stage the interaction term (i.e. the product of the independent and moderation variables) was introduced. This regression test has the following equations:

$$Y = b_0 + b_1X_1 \text{ ----- (1)}$$

$$Y = b_0 + b_1X_1 + b_2X_2 + E \text{ ----- (2)}$$

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_1 X_2 + E \text{ ----- (3)}$$

Where Y represents purchase intention

b_0 = constant

b_1 = strength of the independent variables

X_1 = independent variables

b_2 = strength of the moderators (dummy for moderator)

X_2 = moderators (dummy for moderator)

b_3 = strength of the interaction terms

$X_1 X_2$ = interaction terms

E = error term

The following chapter provides a detailed description of the implemented data analysis.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the statistical data analysis and discusses study findings. The chapter has three sections, starting with descriptive analysis, then the reliability analysis, and then the regression analysis. The descriptive analysis includes the frequencies of the sample's characteristics, and demographic variables. Reliability analysis is necessary to test the composite variables and decide on the most parsimonious items to use; this analysis measures internal consistency through the results of Cronbach's α (coefficient α). The regression analyses using multiple and hierarchical multiple regression tests the study hypotheses of direct effects along with the mediating and moderating effects. Finally, the chapter ends with a discussion of the study results.

4.2 Descriptive Analysis

This section of the data analysis presents the descriptive analysis results, including the frequencies of the sample's characteristics, demographic variables, and normality. The total number of respondents obtained from the data collection was 310; however, only 290 usable responses were analyzed. The remaining 20 responses were eliminated because they were incomplete or did not follow the age group tested in this study (i.e., 20–39 years old).

4.2.1 Respondents' Characteristics

The survey included three items under the demographic sections: gender, age, and educational level. The study focused on millennials, therefore, the age item on the survey was incorporated to ensure that all respondents are millennials (between 20 and 39 years old). Because the sample consisted of all millennial participants, the following graphs will

show the remaining demographic items (i.e., gender and educational level).

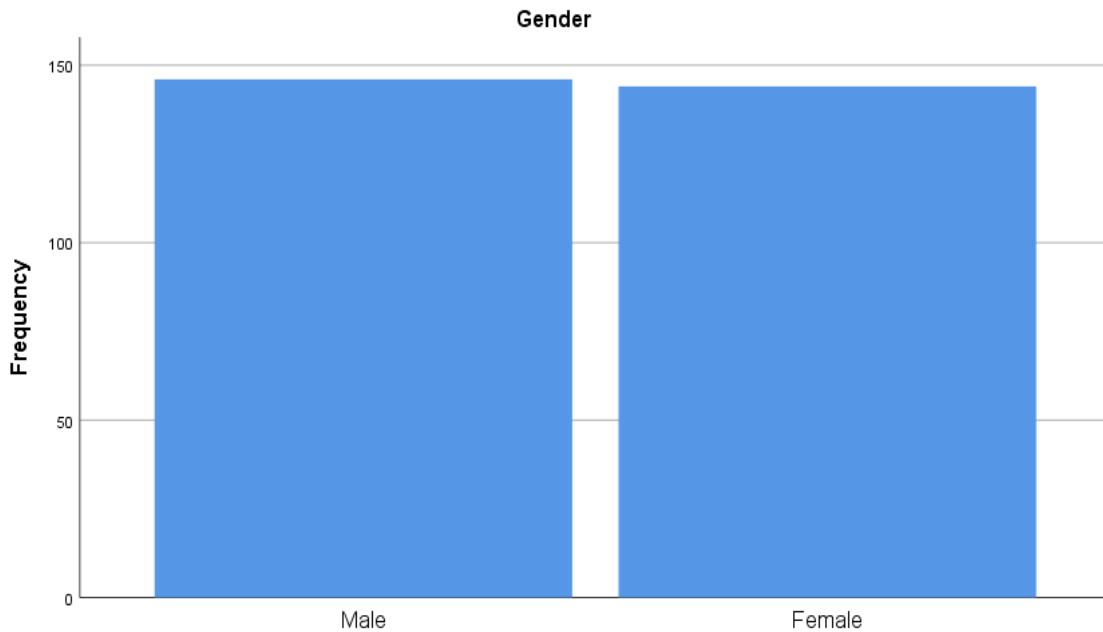


Figure 2. Gender Distribution Graph

Figure 2 shows that the sample comprises 50.3% males and 49.7% females. Although studies show that females are more likely to participate in surveys than males (Curtin et al., 2000; Moore & Tarnai, 2002; Singer et al., 2000; Smith, 2008;), the participants' response rate is affected by the relevance of the topic (Groves et al., 2000; Smith, 2008). In Qatar, 65% are male Instagram audiences, whereas 35% are female (dataportal, 2019). Thus, the balance in response is reasonable.

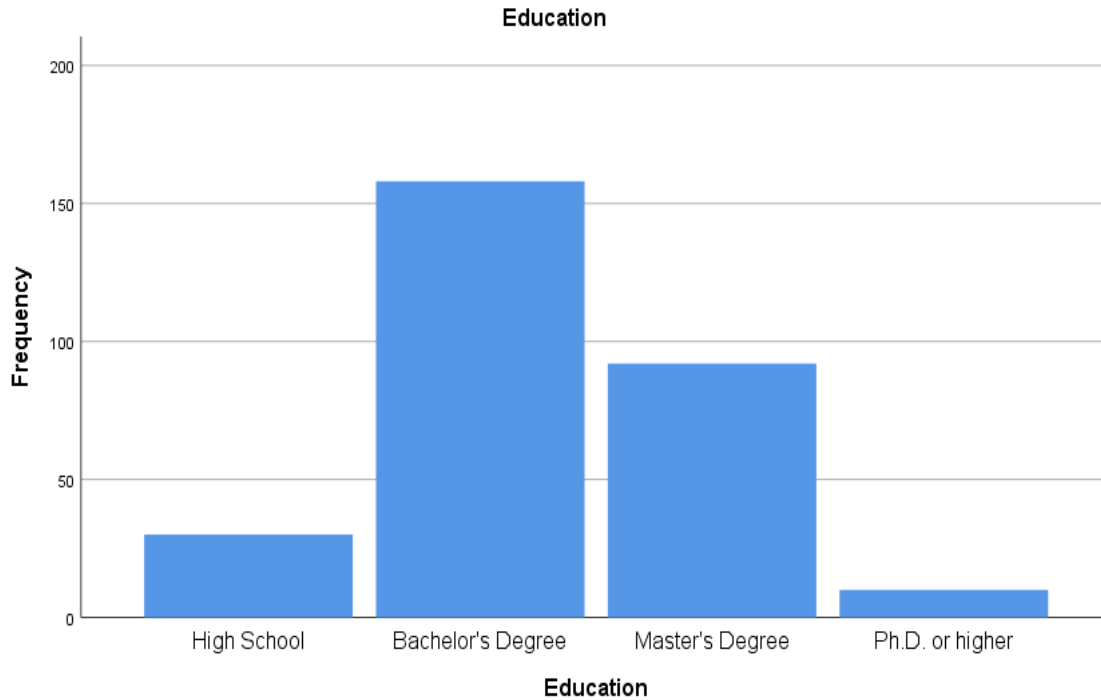


Figure 3: Education Level Distribution Graph

The educational level items in this study included four levels: high school degree holders, bachelor's degree holders, master's degree holders, and Ph.D. or higher. As shown in Figure 3, most of the respondents (54.5%) are bachelor's degree holders. This was followed by (31.7%) of the respondents with a master's degree, and then (10.3%) of the respondents were holders of a high school degree. Finally, 3.4% are holders of Ph.D. degrees or higher.

4.2.2. Descriptive Analysis of the Study Constructs

Conducting the descriptive tests allowed us to observe respondents' average perception for all of the composite variables measured in the current study. Table 2 shows the mean and standard deviation of each composite variable. The means of the constructs are between (4.42) and (5.54), whereas the standard deviation ranges between (0.765) and (1.265). The

results from the analysis of the construct show that the descriptive tests are somewhat similar.

Table 2. Descriptive Analysis of Constructs

Variables	Mean	Std. Deviation
Reciprocity	5.5379	.76553
Commitment/Consistency	4.8822	1.06245
Social Proof	4.4255	1.26580
Authority	4.7351	1.16432
Scarcity	4.7448	1.20976
Liking	5.2152	1.00161
Perceived Information Quality	4.7138	1.04938
Purchase intention	4.8076	.87634

The mean of the first persuasion dimension, reciprocity, is 5.54, as reflected in the table above, which means that most of the participants agree with feeling obliged to return a favor based on what they received. The standard deviation is low (0.76) for the same construct, which shows that participants have similar perceptions (Weick & Sutcliffe, 2007). As for the second persuasion dimension, commitment/consistency, the mean is (4.88), meaning that most participants somewhat agree with being committed and consistent with previous behavior. However, the standard deviation is (0.11), which shows that respondents have similar perceptions. The third persuasion dimension, social proof, shows a mean of (4.42) and a standard deviation of (1.26), which indicates that most respondents somewhat agree that people around them reference their own behavior and that respondents have similar perceptions. The following persuasion dimension, authority,

has a mean value of 4.73, meaning that most respondents somewhat agree to comply with others in the position of authority. The same construct shows a standard deviation of (1.16), indicating that most participants have similar perceptions. Then, the construct scarcity, with (4.74) mean value and (1.21) standard deviation, implying that most respondents also somewhat agree that people want what they are scared to lose and have similar perceptions. The last persuasion dimension, liking, has a mean value of (5.21), showing that most participants agree with others they like. The standard deviation of liking is 1.00, indicating that participants have similar perceptions.

Regarding the construct perceived information quality, the mean value (4.71) suggests that most participants agree with items that identify people's perception of information quality. The standard deviation (1.04) for the same variable shows that respondents have similar perceptions. Finally, the composite variable purchase intention, which has a mean value of 4.81, indicates that most participants somewhat agree that they have intentions to purchase when they are persuaded. However, the standard deviation (0.88) indicates once again that respondents have similar perceptions.

4.3 Exploratory Factor Analysis

Exploratory factor analysis intends to highlight the underlying factors within the measured variables (Osborne, 2015). The analysis is considered a set of multivariate statistical methods in which it determines the factors that are required to account for outlining the observed correlation to reach out to more understanding of the measured variables (Hayton et al., 2004; Fabrigar et al., 1999). The analysis is used to simplify the interrelated measures in a set of variables (Child, 2006) and test the factors that go together and the factors influencing variables (Yong & Pearce, 2013). Thus, EFA is useful for placing variables

into meaningful categories.

4.3.1 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

The Kaiser–Meyer–Olkin (KMO) test is used to measure whether the data are suitable for factor analysis. The KMO test values between (0.8) and (1) suggest that the sampling is adequate (Kaiser, 1974). As shown in Table 3, the KMO value is (0.847), which is between the (0.8) and (1) range. Moreover, a significance level of less than .001 for Bartlett's Test of Sphericity, indicates that the data is appropriate for factor analysis (Bartlett, 1951). As seen from the results, the significance level of Bartlett's Test of Sphericity is (0.000), which is less than (0.001). The results indicate that exploratory factor analysis can be conducted and that the sampling is adequate.

Table 3. Kaiser-Meyer-Olkin and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin		0.847
Bartlett's Test of Sphericity	Approx. Chi-Square	7547.843
	df	903
	Sig.	.000

Table 4. Exploratory Factor Analysis

Items	Factors								Communalities	Variables
	1	2	3	4	5	6	7	8		
Information/materials provided by the company on Instagram are credible	.827								.766	Perceived information quality
Information/materials provided by the company on Instagram are clear.	.803								.632	
Information/materials provided by the company on Instagram are helpful.	.786								.676	
In general, the quality of information/materials provided by companies on Instagram is high.	.775								.771	
Information/materials provided by the company on Instagram are understandable	.762								.708	
Information/materials provided by the company on Instagram have sufficient reasons supporting the opinions	.714								.701	
When a professional tells me something, I tend to believe it is true.		.861							.681	Authority

Items	Factors								Communalities	Variables
	1	2	3	4	5	6	7	8		
I am more inclined to listen to an authority figure than a peer.	.848								.766	
I always obey directions from my superiors	.791								.673	
I always follow advice from experts.	.788								.759	
I am more likely to do something if told, than when asked.	.661								.656	
When I am in a new situation, I look at others to see what I should do.				.807					.687	Social proof
I will do something as long as I know there are others doing it too.				.758					.741	
If someone from my social network recommends a product, I tend to try it.				.740					.746	
It is important to me to fit in.				.738					.671	
I often rely on other people to know what I should do.				.721					.637	

Items	Factors								Communalities	Variables
	1	2	3	4	5	6	7	8		
Once I have committed to do something I will surely do it.			.844						.672	Commitment/Consistency
I try to do everything I have promised to do.			.795						.761	
If I miss an appointment, I always make it up.			.776						.538	
Whenever I commit to an appointment I always follow through.					.770				.601	
When I make plans, I commit to them by writing them down.					.695				.754	
Telling friends about my future plans helps me to carry them out.					.525				.716	
Products that are hard to get represent a special value.						.808			.645	Scarcity
When my favorite shop is about to close, I would visit it since it is my last chance.						.783			.732	
When my favorite brand is almost out of stock I buy two.						.740			.632	

Items	Factors								Communalities		
	1	2	3	4	5	6	7	8			
I would feel good if I was the last person to be able to buy something.						.690				.706	
I believe rare (scarce) products are more valuable than mass products.						.681				.762	
I intend to visit the company's page on Instagram after reading the information/materials provided by them.								.807		.679	Purchase Intention
After reading online information/materials provided by a company on Instagram it makes me desire to purchase the product/service.								.697		.658	
I intend to seek products who's information/materials are provided on my own Instagram social network.								.684		.731	
I will consider buying the product after I have read online information/materials provided by the company.								.638		.604	

Items	Factors								Communalities	Variables	
	1	2	3	4	5	6	7	8			
If someone does something for me, I try to do something of similar value to repay the favor.								.762	.576	Reciprocity	
I always pay back a favor.								.716	.697		
When a family member does me a favor, I am very inclined to return this favor.								.690	.629		
When someone helps me with my work, I try to pay them back								.687	.629		
When I receive a gift, I feel obliged to return a gift.								.685	.642		
When I like someone, I am more inclined to believe him or her.									.720	.645	Liking
The opinions of friends are more important than the opinions of others.									.707	.662	
I will do a favor for people that I like.									.577	.648	
I like to take advice from my social network.									.572	.731	

The current study included eight constructs and 46 preexisting measuring items adapted to fit the study objectives. Exploratory factor analysis was conducted; the results are shown in Table 6. All items loaded on one factor except for one item related to the construct purchase intentions; “ In the future, I may consider the company featured on my Instagram social network as my first choice,” this item was eliminated due to cross-loading. The remaining items of the variables have strong loadings greater than 0.5. Moreover, the above table presents the variables’ communalities, which are the variance in the observed variables accounted for by a common factor or variance (Child, 2006; Yong & Pearce, 2013). Because factor analysis aims to explain the variance through common factors, variables reflecting low communalities—lower than 0.20—need to be eliminated (Child, 2006; Yong & Pearce, 2013). All the analyzed items in this study have high and acceptable communality values (greater than 0.5).

4.3.2 Validity Test

The validity test evaluates the accuracy of the measures used in the research. In this study, three types of validity are measured: face validity, construct validity, and content validity. Face validity assesses the questionnaire’s overall appearance; it is a subjective assessment of the relevance of the measuring instruments (Taherdoost, 2016; Oluwatayo, 2012). An appropriate measure of the constructs was chosen by both the researcher and the supervisor based on their understanding of the study constructs. Construct validity is the degree to which the concept is transformed into reality (Taherdoost, 2016). Construct validity was achieved using previously validated items in the literature. Finally, content validity, which is the degree to which the questionnaire’s items, reflects the content universe to which the instrument will be generalized (Straub et al., 2004; Taherdoost, 2016). A pilot study was

conducted to ensure content validity and revision of the measurement items based on expert assessments. Moreover, content validity is ensured from the exploratory factor analysis showing that all constructs have acceptable item loadings (greater than 0.5).

4.4 Reliability Test

It is necessary to run the reliability test to measure the variables' internal consistency using Cronbach's alpha (coefficient α). To be acceptable, the values of Cronbach's alpha reliability coefficient (coefficient α) should range between 0 and 1; a higher value of the Cronbach's alpha reflects higher reliability across the items. According to Hair and colleagues (2010), the Cronbach alpha's minimum threshold should be 0.70. Therefore, the reliability test was conducted for all study constructs.

Table 5 shows the results of the reliability test. All items are kept for reciprocity since the items have acceptable internal consistency, Cronbach alpha value (0.793). For commitment/ consistency, by removing item 4 (Telling friends about my future plans helps me carry them out), the Cronbach alpha value is increased to (0.857). However, because the Cronbach alpha value of (0.833) is already acceptable, removing the item does not considerably increase the Cronbach alpha value, so it was not removed. For the next persuasion dimension, social proof, all items are kept since the items have acceptable internal consistency, Cronbach alpha value (0.880). For authority, removing item 6 (I am more likely to do something if told than when asked.) Will increase the Cronbach alpha value to (0.901). However, the item is not deleted since the Cronbach alpha value of (0.896) is acceptable. All items for the persuasion dimensions scarcity and liking have acceptable internal consistency, with a Cronbach alpha value (0.846) for the earlier and (0.813) for the latter. The items of the construct perceived information quality have acceptable internal

consistency with a Cronbach alpha value (0.907). Similarly, for purchase intention with Cronbach alpha value (0.827). As such, all constructs have acceptable values of Cronbach alpha; thus, internal consistency is assured.

Table 5. Cronbach's Alpha Coefficient

Dimensions	Alpha	Items	Analysis
Reciprocity	0.793	5	Acceptable
Commitment/Consistency	0.833	6	Highly Reliable
Social Proof	0.880	5	Highly Reliable
Authority	0.896	6	Highly Reliable
Scarcity	0.846	5	Highly Reliable
Liking	0.813	5	Highly Reliable
Perceived Information Quality	0.907	6	Highly Reliable
Purchase Intention	0.827	5	Highly Reliable

4.5 Regression Analysis

Regression analysis estimates the relationship between variables. The following section presents four related regression tests. The section starts with Pearson's correlation test, which measures the strength of a linear association between the tested variables—followed by the multicollinearity test—to evaluate the degree of correlation between predictor variables. Then, the multiple regression test was used to examine the relationship between persuasion dimensions and perceived information quality. Finally, the hierarchical multiple regression test was used to examine the mediation and the moderation relationship between the variables.

4.5.1 Pearson's Correlation Test

Pearson's correlation coefficient measures if the variables are associated with one another and denotes that the other variable tends to shift in a particular direction when a variable changes in value. Correlation coefficient values could be positive, or negative and range between (+1) and (-1). A positive correlation (+1) means that variables move in the same direction; as one variable goes up, the other variable goes up and vice versa. A negative correlation (-1) means that variables move opposite one another; as one variable decreases, the other increases and vice versa. A correlation coefficient of zero (0) indicate that the variables have no relationship (Sedgwick, 2012). It is also necessary to look into the level of significance in the correlation test results; to consider the correlation as significant, the p value should be less than (0.05).

Table 6 reveals that reciprocity is positively and significantly correlated with all other persuasion (all $p < .05$) Then, the persuasion dimension commitment/consistency is positively correlated with authority. Moreover, social proof is positively correlated with authority, scarcity, and liking at the p value of $p < .01$. Authority is positively correlated with liking. By contrast, scarcity is positively correlated with social proof and liking. The strongest positive correlation is between social proof and liking of $r = .556$ at $p < .01$, followed by social proof and scarcity $r = .450$ at $p < .01$, and the scarcity and liking of $r = .509$ at $p < .01$. Regarding examining the correlation between perceived information quality and persuasion dimensions: reciprocity, social proof, authority, scarcity, and liking show a positively correlated association. The strongest positive correlation is between perceived information quality and liking ($r = .558$; $p < .01$). Moreover, it is evident that there is a significant positive correlation between purchase intentions and the persuasion

dimensions, reciprocity, social proof, authority, scarcity, and liking, as well as the variable perceived information quality. The correlation was the strongest between perceived information quality and purchase intention ($r = .511; p < .01$)

Table 6. Pearson's Correlation

		Reciprocity	Commitment / Consistency	Social Proof	Authority	Scarcity	Liking	Perceived Information Quality	Purchase Intention
Reciprocity	Pearson Correlation	1	.147*	.298*	.205**	.211**	.303*	.220**	.225**
	Sig. (2-tailed)		.012	.000	.000	.000	.000	.000	.000
Commitment/Consistency	Pearson Correlation	.147*	1	-.055	.230**	.035	-.104	-.049	-.024
	Sig. (2-tailed)	.012		.350	.000	.555	.078	.406	.687
Social Proof	Pearson Correlation	.298**	-.055	1	.257**	.450**	.556*	.373**	.380**
	Sig. (2-tailed)	.000	.350		.000	.000	.000	.000	.000
Authority	Pearson Correlation	.205**	.230**	.257*	1	.079	.129*	.161**	.200**
	Sig. (2-tailed)	.000	.000	.000		.180	.028	.006	.001
Scarcity	Pearson Correlation	.211**	.035	.450*	.079	1	.409*	.370**	.221**
	Sig. (2-tailed)	.000	.555	.000	.180		.000	.000	.000

		Reciprocity	Commitment/ Consistency	Social Proof	Authority	Scarcity	Liking	Perceived Information Quality	Purchase Intention
Liking	Pearson Correlation	.303**	-.104	.556**	.129	.409**	1	.558**	.441**
	Sig. (2- tailed)	.000	.078	.000	.028	.000		.000	.000
Perceived Information Quality	Pearson Correlation	.220**	-.049	.373**	.161**	.370**	.558**	1	.511**
	Sig. (2- tailed)	.000	.406	.000	.006	.000	.000		.000
Purchase Intention	Pearson Correlation	.225**	-.024	.380**	.200**	.221**	.441**	.511**	1
	Sig. (2- tailed)	.000	.687	.000	.001	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).

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

4.5.2 Collinearity Tests

Multicollinearity is a statistical phenomenon showing if two or more predictor variables are highly correlated in the multiple regression model (Daoud, 2017). In the current study, the multicollinearity was tested to certify that each of the six dimensions of persuasion contributes to explaining the dependent variable in its unique way. Tolerance and Variance Inflation Factor (VIF) values are the measures used to examine multicollinearity. A tolerance value higher than zero (0) shows low multicollinearity, whereas a tolerance value closer to zero (0), or less than 0.10, indicates collinearity (Daoud, 2017). As presented in Table 7, all tolerance values are higher than 0.631, which indicates little collinearity. Moreover, the VIF values are low for all constructs, ranging between 1.118 and 1.705. Collinearity becomes an issue if the VIF is higher than (10); hence, the constructs do not exhibit collinearity issues.

Table 7: Multicollinearity Test

Construct	Tolerance	VIF
Reciprocity	.842	1.188
Commitment/Consistency	.894	1.118
Social Proof	.586	1.705
Authority	.861	1.161
Scarcity	.750	1.333
Liking	.631	1.585

4.5.3 Regression test

Regression tests if one variable predicts another, multiple regression, and hierarchical multiple regression analyses were conducted to test the study variables' hypothesized relationships. Multiple regression explains the association between two or more independent variables and one dependent variable. Hierarchical multiple regression examines the association between the independent and dependent variables in a sequential way. Thus, this study first examines the relationship between persuasion dimensions and perceived information quality. Second, the relationship between perceived information quality and purchase intention was tested using the simple regression model. Then, the mediating effect of perceived information quality was calculated based on Baron and Kenney's (1986) recommendations, and more recently, Ndubisi and Natarajan (2018). Finally, the moderating effect of demographic variables, namely gender and education, on the relationship between persuasion dimensions and perceived information quality was tested. A hierarchical multiple regression model was employed to test the moderating effects following Jaccard, et al. (1990) style.

Dummy variables were created for the demographic dimensions before including them in the regression model (Hair et al., 1998; Ndubisi, 2006). The dummy variables were created as follows (a K-1 formula was used, where K represents the original number of groups): male (0) and female (1); undergraduate (0) and graduate (1).

The regression test contains fundamental values to be explained. The correlation between the variables is reflected from the value of (R), wherein (R^2) reflects the percentage of the level of variation in the dependent variable that the independent predictor(s) explains. The significance level is reflected in the *p* value; when the *p* value is less than 0.05, then the

association is significant. The (F) value tests the significance of the regression model. To accept the null hypothesis, the (F) value should be greater than zero (0). Finally, the Beta (β) value reflects whether the relationship between variables is positive or negative.

4.5.4 Direct Effects

The relationship between the persuasion dimensions—reciprocity, commitment/consistency, social proof, authority, scarcity, and liking—and perceived information quality was examined using multiple regression techniques. The results in Table 8 indicate that four out of the six persuasion dimensions, precisely, commitment/consistency, authority, scarcity, and liking, contribute significantly ($F = 39.59$; $p < .001$) and predict 46.4% of the variations in perceived information quality. There is a direct significant association between commitment/consistency ($\beta = -0.109$; $p = .012$), authority ($\beta = 0.089$; $p = .022$), scarcity ($\beta = 0.081$; $p = .046$), liking ($\beta = 0.477$; $p = .000$), and perceived information quality. These outcomes provide support for hypotheses H2, H4, H5, and H6. Because no direct association was found for reciprocity and social proof on perceived information quality, and the coefficients are not significant, H1 and H3 are rejected.

Table 8. Association of Persuasion Dimensions with Perceived Information Quality

Predictor Variables	Perceived Information Quality	
Variables	t	B (p-value)
Constant	3.149	1.215 (.002)
Reciprocity	1.523	.094 (.129)
Commitment/Consistency	-2.542	-.109 (.012)
Authority	1.360	.089 (.022)

Predictor Variables	Perceived Information Quality	
Variables	t	B (p-value)
Social proof	2.312	.060 (.175)
Scarcity	2.002	.081 (.046)
Liking	9.104	.477 (.000)
R		0.681
R ²		0.464
F(sig)		39.585 (.000)

4.5.5 Perceived Information Quality and Purchase Intention

Table 9 presents the results of the association of perceived information quality and purchase intentions. The regression model explains 49.4% of the variation in purchase intentions ($\beta = 0.559$; $p = .000$). This means that the perceived information quality has a significant impact on purchase intentions. In other words, perceived information quality positively influences purchase intentions. This result provides support for H7.

Table 9: Association of Perceived Information Quality and Purchase Intention

Predictor Variables	Purchase Intention	
Variables	t	B (p-value)
Constant	13.606	2.217 (.000)
Perceived Information Quality	16.504	.559 (.000)
R		0.703
R ²		0.494
F(sig)		272.3 (.000)

4.5.6 Mediating Effect

Mediation involves a situation in which the independent variable's effect on the dependent variable is best explained through the presence of a third variable (the mediator). To test for the mediating effect of perceived information quality in the association of the independent variables with purchase intention, a regression that hierarchically regressed the persuasion dimensions (reciprocity, commitment/consistency, social proof, authority, scarcity, and liking) in Stage 1 and perceived information quality in Stage 2 against purchase intention was conducted. Table 10 shows the results of this analysis.

As seen from the results, perceived information quality partially mediates in the relationship between authority, scarcity, and liking, but has no mediating effect in the reciprocity, social proof, and commitment/consistency link. Based on Baron and Kenney's (1986) guidelines, and more recently, Ndubisi and Natarajan (2018), these results were reached on the following basis: (a) There is an increase in R^2 between Stage 1 and Stage 2 in the regression models and (b) There is a decrease in β coefficient from Stage 1 to Stage 2. In the case of full mediation the formerly significant β coefficient becomes nonsignificant in Stage 2; for partial mediation, Stage 2 β coefficient is significantly reduced; and for no mediation, there is no reduction in β coefficient between Stage 1 and Stage 2 (Baron & Kenney, 1986; Ndubisi & Natarajan, 2018). As a consequence of this, Baron and Kenney's (1986) suggest that there is a distinction between total mediation (i.e., all of the effect of the independent variable goes through the mediator) and partial mediation (i.e., only part of the effect of the independent variable goes through the mediator).

Table 10, the results show that the coefficient of determination (R^2) has increased between Stage 1 (0.412) and Stage 2 (0.587) in the regression models. The F value also has increased in Stage 2 (from 31.853 to 55.263) and reported a significant level in both stages ($p = 0.000$).

The β coefficients decreased from Stage 1 to Stage 2 for authority (from 0.129 to 0.095), scarcity (from 0.067 to 0.023), and liking (from 0.304 to 0.114), indicating that perceived information quality partially mediates in the relationship between these dimensions and purchase intention. Thus, these results partially support hypotheses H8d, H8e, and H8f.

Since condition (a) is not met for reciprocity and social proof (i.e., the direct association with the mediator is not significant), and there is no reduction in the β coefficient between Stage 1 and Stage 2 for commitment/consistency (-0.071 and -0.053) H8a, H8b, and H8c are rejected. Conclusively, the effect of the persuasion dimensions, authority, scarcity, and liking is transmitted partially through perceived information quality to purchase intention.

Table 10. Mediation Effect of Perceived Information Quality

Stage 1: β Coefficients without perceived information quality (p)	Stage 2: β Coefficients with perceived information quality (p)
Dependent variable- purchase intention	Dependent variable- purchase intention
Independent Variables	Independent Variables
B (p)	B(p)

Reciprocity	.066 (.213)	Reciprocity	.062 (.167)
Commitment/Consistency	-.071 (.061)	Commitment/Consistency	-.053 (.098)
Social proof	.112 (.006)	Social proof	.097 (.004)
Authority	.129(.000)	Authority	.095(.00 1)
Scarcity	.067(.066)	Scarcity	.023 (.455)
Liking	.304(.000)	Liking	.114(.01 2)
R ² (0.412)		R ² (0.587)	
F Change (sig) 31.853 (0.000)		F Change (sig) 55.263 (0.000)	

4.5.7 Moderating Effects

The moderator is a variable that influences the direction or the strength of the relationship between the predictor(s) and the dependent variable (Baron & Kenny, 1986). In this study, a hierarchical multiple regression model was used to examine the moderation effect of gender and educational level in the relationship between the persuasion dimensions and perceived information quality. For both demographic variables (i.e., gender and education), the independent variables were entered first, followed by the dummy coded gender or education, and finally, the interaction term.

Table 11 presents the results of the moderating effects of gender in the relationship between the persuasion dimensions and perceived information quality. The interaction of gender with the persuasion dimensions contributes significantly ($F = 24.906$; $p = .000$) and explains 54.8% of the variations in perceived information quality. However, gender

moderated some relationships, providing partial support for hypothesis H9. Specifically, gender moderates the relationship between commitment/consistency ($\beta = -0.212$; $p = .013$) and perceived information quality, social proof ($\beta = -0.279$; $p = .001$) and perceived information quality, and authority ($\beta = 0.241$; $p = .015$) and perceived information quality. The results provide support for hypotheses H9b, H9c, and H9d.

Table 11. Moderating Effects of Gender

Predictor variables	Perceived information quality	
Variables	t	B (P-value)
Constant	2.374	.356 (.512)
Reciprocity	.913	.203(.018)
Commitment/Consistency	3.858	.060(.362)
Social proof	-2.095	.256(.000)
Authority	.035	-.119(.037)
Scarcity	5.684	.002(.972)
Liking	1.789	.407(.000)
Gender	-.451	1.330(.075)
Reciprocity @ Gender	-2.498	-.054(.653)
Commitment/Consistency @ Gender	-3.283	-.212(.013)
Social proof @ Gender	3.097	-.279(.001)
Authority @ Gender	1.330	.239(.002)
Scarcity @ Gender	.176	.105(.185)
Liking @ Gender	2.374	.018(.861)
R		0.740
R ²		0.548
AR2		0.526
F(sig)		24.906 (0.000)

Table 12 presents the moderating effects of education on perceived information quality. The interaction of educational level with the persuasion dimensions contributes significantly ($F = 24.906$; $p = .000$) and explains 49.9% of the variance in perceived information quality variation. However, education moderates the relationship between social proof ($\beta = -0.301$; $p = .001$) and perceived information quality, and between authority ($\beta = 0.230$; $p = .006$) and perceived information quality. Hence, the results support H10c and H10d.

Table 12. Moderating Effects of Education

Predictor Variables	Perceived Information Quality	
Variables	t	B (P-value)
Constant	1.290	1.475 (.198)
Reciprocity	.785	.148(.433)
Commitment/Consistency	-1.065	-.138(.288)
Social proof	3.570	.491(.000)
Authority	-1.901	-.223(.058)
Scarcity	-.086	-.011(.932)
Liking	2.388	.383(.018)
Education	-.259	-.210(.796)
Reciprocity @ Education	-.238	-.034(.812)
Commitment/Consistency @ Education	.420	.037(.675)
Social proof @ Education	-3.292	-.301(.001)
Authority @ Education	2.770	.230(.006)
Scarcity @ Education	.517	.043(.606)
Liking @ Education	.472	.057(.638)
R		.706
R ²		0.499
AR2		0.474
F(sig)		24.906 (.000)

4.6 Discussion

The study proposed ten hypotheses. Regression analyses were conducted to test the hypothesized relationships. As seen from the multiple regression analysis results, four out of the six persuasion dimensions—commitment/consistency, authority, scarcity, and liking—demonstrate a statistically significant effect on perceived information quality. Reciprocity and social proof show no significant effect on perceived information quality. H1 suggested a relationship between susceptibility to reciprocity and perceived information quality. Although the dimension of reciprocity demonstrates that people tend to feel obliged to repay for generosity, millennials could respond positively to reciprocity when the "gift" received represents a materialistic value instead of informational value. H2 proposed a significant relationship between the persuasion dimension, commitment/consistency, and perceived information quality. The findings show a statistically significant association between the two. However, the beta coefficient for commitment/consistency is negative ($\beta = -0.109$); in other words, for every 1-unit increase in commitment/consistency, the outcome variable (i.e., perceived information quality) decreases by -0.109 . This means that when millennials' commitment and consistency to a particular brand increase, their perception of other brands' information quality decreases. Highly committed millennials have higher exceptions to the quality of information.

H3 concerns the relationship between social proof and perceived information quality. The results reveal no significant influence of social proof on perceived information quality; hence, H3 is not supported. Social proof serves as an influence to accept information acquired from others as evidence about reality (Deutsch & Gerard, 1955).

Perhaps, these others should be peers or similar people rather than companies. Therefore, companies targeting millennials on social media using Instagram require more than just notifying them that the product is a 'best seller.' Possibly, such information is overused, and more in-depth information quality is required to capture their attention. H4 suggested a relationship between millennials' susceptibility to authority and perceived information quality. These findings show a positive link between the persuasion dimension of authority and perceived information quality, thus conforming that millennials comply with others in the position of authority in the social media context.

Furthermore, H5 exhibited a significantly positive relationship between the persuasion dimension scarcity and perceived information quality. These findings demonstrate that millennials want what they are scared to lose and that this psychological phenomenon affects perceived information quality. Emphasizing the brevity of an opportunity is one means of implementing scarcity; a common way of doing that is establishing a window of opportunities such as limited supply/purchases and limited access time (Cialdini, 2009; Slattery et al., 2013). Given the influence of scarcity on perceived information quality, marketers can exploit scarcity information when targeting millennials. H6, which is proven to be significant, assumes a relationship between liking and perceived information quality. These results reveal a positive link between the persuasion dimension liking and perceived information quality. This association demonstrates that millennials are influenced by what they like and that liking affects their perception of the information quality present on their Instagram account. Recommendations by friends allow marketers to leverage the liking dimension by benefiting from the relationship maintained with a friend (Cialdini, 2009).

Further, the results established a significant positive relationship between perceived information quality and purchase intention, supporting H7. Henceforth, millennials are more likely to purchase when the perceived information quality presented on their Instagram account is high. These findings are in line with Peterson et al. (1997), who stated that high-quality information found online results in a better purchase.

Moreover, H8 assumes that perceived information quality mediates the relationship between persuasion dimensions and purchase intention. Our results partially support H8 and prove that perceived information quality positively affects the relationship between authority, scarcity, and liking and purchase intentions. First, perceived information quality mediates the relationship between authority and purchase intentions (H8d). The study's outcome proves a positive link between the persuasion dimension, authority, and purchase intentions. Moreover, perceived information quality mediates the relationship between scarcity and purchase intentions, supporting H8e, which is in line with Gierl et al. (2008) and Klaver (2015), signifying the effectiveness of scarcity dimensions on purchase intention in a different context (e.g., clothing and electronics). Likewise, perceived information quality mediates the relationship between liking and purchase intentions (H8f), supporting the positive link between the persuasion dimension liking and purchase intentions. On the other hand, perceived information quality has no mediating effect on the relationship between commitment/consistency and purchase intention. Hence, H8b is rejected. This indicates that perceived information quality does not reflect on commitment/consistency and has no influence on purchase intention. Further, perceived information quality has no mediating effect on the relationship between reciprocity and purchase intention (H8a), as well as social proof and purchase intentions(H8c)

Consequently, based on this study's findings, perceived information quality plays a role in explaining the relationship between the persuasion dimensions: authority, scarcity, liking, and purchase intentions within the millennial generation.

Moreover, the results reveal that gender moderates the relationship between commitment/consistency, social proof, authority, and perceived information quality. The results support H9b, H9c, and H9d. Regarding the commitment/consistency dimension, since the coded variable is female and the coefficients' direction is negative, the coded variable has a lower significant influential effect than the uncoded variable. Hence, the impact of commitment/consistency on perceived information quality is stronger among male customers than among their female counterparts. This shows that men, more so than women, exhibit more committed and consistent behavior as companies' information quality increases. Similarly, with social proof, social proof on perceived information quality is stronger among male customers than female customers. This indicates that men are more susceptible to social proof than women when a company's information quality improves. As for authority, since the direction of the coefficients is positive, then the impact of authority on perceived information quality is stronger among the female millennial customers. Showing that women, more so than men, demonstrate more susceptibility to authority as the quality of the information provided by companies increases.

Finally, education moderates the relationship between social proof authority and perceived information quality. Supporting hypotheses H10c and H10d. The results indicate that the impact of social proof on perceived information quality is stronger among the graduate degree holders (i.e., Masters and Ph.D.) millennials than undergraduate degree

holders (i.e., high school and bachelors). This shows that the impact of susceptibility to social proof on information quality is greater among the more educated respondents. This could be because they value quality information due to their high level of education and that leads them to maintain in society. On the other hand, the impact of authority on perceived information quality is more substantial among less-educated millennials. Showing that less-educated customers are more subject to authority than more educated millennials.

CHAPTER 5: CONCLUSIONS, LIMITATIONS, IMPLICATIONS AND FUTURE RESEARCH

5.1 Introduction

The final chapter includes the conclusions derived from the thesis. This chapter first outlines the theoretical and practical implications of the study findings. Then, the research conclusions are presented based on the findings. Finally, a discussion of the study limitations and suggestions for future research are highlighted.

5.2 Theoretical and Managerial Implications

This study provides substantial theoretical and managerial contributions. Studies have indicated the importance of persuasion in marketing (e.g., Cialdini, 2001; Stafford, 1999). By examining persuasion-related variables in the context of social media marketing while focusing on a generation that has gained limited attention in the literature, the current research expands on the present knowledge of the impact of persuasion on millennials. Moreover, the proposition that perceived information quality by millennials resulting from persuasion dimensions leads to purchase intentions extends the existing knowledge of social media marketing. Furthermore, the study's findings offer managerial and practical implications by understanding the persuasion dimensions that trigger millennials and influence information quality perception on purchase intentions.

5.2.1 Theoretical Implications

Research reveals that six persuasion dimensions govern how one person may influence another (Cialdini & Goldstein, 2002); these dimensions are the ones examined in the current study. However, the study alters the six dimensions to fit into the technological era.

Empirical research has widely used these dimensions. However, there is a necessity for more studies in this area due to persistent social changes. These changes involve the alteration of marketing approaches to influence others. Persuasion is an essential human process that affects almost all aspects of social interaction (Gardikiotis & Crano, 2015). Therefore, persuasion is essential to advance the marketing literature.

The current research contributes to the literature by providing insights into the modern concept of social media marketing. The paper highlights the importance of using persuasion dimensions to influence purchase intention as part of social media marketing efforts. By forming a conceptual model with constructs related to psychological aspects, this thesis extends the discussion of persuasive social media marketing and captures a technological perspective while considering technology generation. The paper empirically analyzes constructs that have been relatively unexplored in the social media marketing context; it identifies the perceived information quality that is formed by persuasion dimensions. Moreover, the study considers demographic variables to moderate the relationship. Therefore, it covers a wide range of variables and connects it to persuasion. The conceptual model established in the present study can be expanded further and replicated by future researchers. Furthermore, the model can be applied to different contexts within the realm of persuasive technology in marketing.

This thesis is theory-driven, and it confirms the principles of the theories underpinning it. The study connects persuasion dimensions with persuasion-related theory along with generation theory. Thus, this research contributes to and advances these established theories. First, through the ELM, the study indicates that millennials' sentiments and emotional involvement from their perception toward companies'

information quality. This transition of perceived information quality resulting from persuasion motivates them to respond through greater purchase intentions. The ELM argues that a cognitive event is a primary interpretation of persuasion, and the receivers of the persuasive message depend on mental and psychological processes to react to the message (Petty & Cacioppo, 1986). The ELM underpins the persuasion dimensions examined in this study. The findings reveal a strong direct association of commitment/consistency, authority, scarcity, and liking with perceived information quality, whereas authority, scarcity, and liking are associated with purchasing intentions through perceived information quality. Further, the results indicate that perceived information quality and purchase intentions are statistically significant. Therefore, the ELM is a relevant theory in the context of social media marketing research.

In addition, the ELM is an appropriate theoretical lens for identifying millennials' susceptibility to persuasion. Likewise, as indicated earlier, the study focuses on millennial consumers; hence, its findings contribute to the generation theory. The millennial generation is connected with technology, embraces new forms of media more than any other generation, and is highly influenced by forms of technology, more specifically social media (Pitta, Hennigs, & Langner, 2012). The current research confirms that these theoretical findings demonstrate the relevant persuasion aspects that affect millennials' online shopping behavior. Technology has been associated with millennials (Opaschowski, 1999; Palfrey & Gasser, 2008; Prensky, 2001), and millennial consumers express themselves through technological devices as technology provides a wide range of information for this segment. They are active more so than any other generation in integrating technologies into their lives while using the Internet and their technological

devices for marketing purposes, as such finding information and connecting to brands (Moore, 2012). The study supports these theoretical findings, revealing the relevant psychological aspects of persuasion that affect millennial consumers' online shopping behavior. The extent to which they perceive the quality of the information provided online, specifically on their social media platforms, is based on three of the persuasion dimensions examined in this study, namely, commitment/consistency, authority, scarcity, and liking.

Millennials' susceptibility to the persuasion dimensions examined in this study (i.e., authority, scarcity and linking) influences their perception of information quality and, consequently, their purchase intentions. The findings also reveal the interactions of persuasion dimension and perceived information quality with millennial consumers' demographic traits. This indicates that different persuasion dimensions affect how males and females perceive information quality. And that the same applies to more and less-educated millennials. Moreover, many scholars have indicated the lack of research on the technology generations, namely millennials (Ndubisi & Natarajan, 2018; Pitta et al., 2012). Thus, the current research fills a significant research gap. The proposed model examines how perceived information quality transmits the effect of persuasion dimensions to one of the vital marketing outcomes (purchase intentions). By testing the model among millennials, which are little understood and less researched market segments (Ndubisi & Natarajan, 2018), the current study adds value to the existing literature, and its findings contribute to the generation theory.

5.2.2 Managerial Implications

The current study, unlike other studies that focused on personalized persuasion, considers persuasive technologies from a brand's perspective. Hence, providing marketing managers

with a better understanding while targeting millennials. Increasing purchase intentions is one of the most crucial marketing outcomes desired by marketers. Therefore, marketers pursue persuasion strategies to influence customers. Consequently, marketing managers need to understand customers' susceptibility to persuasion to reach their target market better. The three main persuasion components are the source, message, and audience (Hovland, Janis, & Kelley, 1953). This study gives insights to marketing managers of the use of persuasion in marketing by narrowing the components of source, message, and audience. Wherein, the source is illustrated with social media, namely Instagram, the message is clarified by information quality, and millennials mirror the audience.

The findings make valuable contributions to marketing efforts by determining how persuasion dimensions and specify the ones that affect millennials' perceived information quality and purchase intentions. Moreover, the findings show gender differences as well as differences in educational levels among millennials themselves. By building a model for marketing managers that identifies relevant persuasion aspects to consider when developing persuasive strategies. These aspects of persuasion that marketers should consider include commitment/consistency, authority, scarcity, and liking, and considering perceived information quality on their millennial's customers' purchase intentions. First, the findings verified that not only the older generation is susceptible to persuasion, but also the modern generation of millennials. Second, the study gives marketers insights into what persuasion tactics influence millennials' perception of information quality. Third, the psychological phenomena of susceptibility to persuasion are vital, but information quality and how millennials perceive it is an important link to the desired marketing outcome—purchase intention.

When the young generation is exposed to the psychological feeling of commitment/consistency, authority, scarcity, and liking, they build a positive perception toward information quality. The study reveals that commitment/consistency influences perceived information quality among the millennial generation. However, they have higher expectations to the quality of information; this can benefit marketing managers since it will be harder for competitors to capture millennial customers' attention, making them more loyal to the brand. By contrast, attracting these customers will require attention to the quality of information. According to Cialdini (2002), people are not only judged by their thoughts, but also by their actions. Managers can benefit from the foot-in-the-door technique by Freedman and Fraser (1966), where a small request overlays the way for an agreement with larger subsequent requests. This can be achieved by encouraging customers to start with small actions such as engaging in competitions or challenges or even choosing among the two options given by brands. Then brands can reach out to these customers, for example, by asking them to sign up for a service, which will more likely result in these customers responding to the brand's request due to their past commitment.

Second, the dimension of authority has a significant impact on the way millennials perceive information quality. Marketers should consider the influence of authority among the millennial generation. The expectations of authority figure matter to this generation since they pressure themselves to succeed and please these individuals (Palmer, 2014). Authority is sparked by symbolic factors such as clothes, titles, and trapping (Cialdini, 2006). These three factors can be applied in a social media context. Clothes can be applied by looking relevant to the industry by leveraging visuals on social media platforms. This can be easily leveraged on Instagram by showcasing the company's products using the

platform's visuals. Titles (e.g., Industry experts, founder, Prof., Dr.) are aspects that trigger that authority principle. When customers reach out to companies for assistance, they will value if someone who has the experience would address their concerns. Thus, managers can establish and support the credentials of their staff by providing them with authority titles. For example, Shopify, an e-commerce business that helps a business build an online store, calls its employees "Shopify Experts." While trapping is related to the indirect cues that companies can showcase in their social media marketing, such as including testimonials on their accounts as well as by the number of shares and likes they get. These factors affect the way people perceive authority figures and influence their behavior.

Additionally, the findings support the substantial influence of scarcity, whereas adding value to managers of the effectiveness of using scarcity among millennials. This dimension is frequently used online, such as in airlines or hotel bookings. Young adults using social media platforms are susceptible to scarcity, perhaps more than any other generation due to the need for uniqueness. Furthermore, managers should consider the influence of liking, as it has a significant impact on millennials' purchase intentions. Understanding what "liking" means to this segment is critical for marketers. The effectiveness of liking in persuasion has already been done in practice, such as the Tupperware party that made Tupperware successful (Cialdini, 2001). This research confirms the effect of liking in theory by showing that liking has a significant relationship with perceived information quality and purchase intention among the modern generation of millennials. According to Cialdini (2001), five factors powers the persuasion dimension of liking: physical attractiveness, similarity, compliments, contact and cooperation, and conditioning and association. Managers can also apply these factors to social media

marketing. The platform should be well designed and functional to serve physical attractiveness. The similarity is indicated by tailoring the platform to relate to the target market. The compliment factor can be leveraged while replying to and commenting on the customer's concerns and feedback, whether positive or negative, as well as sharing talks with customers on social media. Furthermore, contact and cooperation are related to the brand personality and what the brand stands for. For example, Apple products are environmentally friendly, showing a positive image to the customers, hence serving, contacting, and cooperating. Finally, reflecting what the brand represents in terms of the product itself and the graphics of their online platforms creates an association that customers can support.

Furthermore, study found no direct relationship between reciprocity and perceived information quality, as well as social proof and perceived information quality. Regarding reciprocity, managers should give something in return while targeting the young generation. Reciprocity can be transformed into a social media context by allowing users to express their opinions through reviews, rating the brands, and sharing feedback. Thus, involving customers in the information presented by companies could help managers leverage this dimension. As for social proof, millennials are more likely to consider purchasing a product or service when similar others use it. According to Cialdini (2009), claims such as "most popular" or "used by many people" indicate social proof. Thus, managers may use these claims to leverage social proof among this young generation. Nowadays, testimonials and celebrity endorsement are among the highly used social proof activities companies pursue. For example, Buffer (an online company that helps businesses build their brands on social media) invites celebrities and influencers to take over their

Instagram accounts now and then. They have recently invited Ryan Hoover and Niv Dror of Product Hunt to go live on their Instagram story and show customers how they use Buffer (Lua, 2020).

Additionally, the study reveals a significant relationship between perceived information quality and purchase intentions, confirming that customers' willingness to purchase is determined based on their perception of the received information quality (Cheung, 2008). All of these persuasion dimensions taken together contribute significantly to marketing practitioners. Considering how millennials perceive information quality by companies as a result of persuasion will lead to greater purchase intentions and, therefore, more significant sales. Persuasion is considered the best application of consumer psychology; through persuasion, consumers' motivation to connect with companies increases (Stafford, 1999), and social media enables simpler ways of interaction between customers and brands; hence, managers should leverage this interaction by focusing on the importance of persuasion in marketing practice. Finally, the study shows gender differences among millennials. Males show stronger susceptibility to commitment/consistency and social proof of perceived information quality than females. In comparison, females scored stronger on authority on the relationship. Managers can consider these differences in weather by targeting males or females. Moreover, targeting more educated people will require managers to consider social proof, while targeting less-educated millennials requires considering the authority principle.

5.3 Research Conclusions

This thesis has explored the impact of persuasion dimensions on perceived information

quality and purchase intentions among the millennial generation. The study considered the mediating effect of perceived information quality on the relationship between the six persuasion dimensions and purchase intentions. The examined persuasion dimensions included reciprocity, commitment/consistency, authority, social proof, scarcity, and liking. The conceptual model and the hypothesis development were developed based on two established theories, mainly the ELM and partially generation theory.

The thesis findings indicate that four out of six of the hypothesized direct effects play a key role in millennials' perception of information quality. Precisely millennials' susceptibility to commitment/consistency leads to higher expectations of information quality. The research also found that authority figures of symbolic significantly influence millennials' perceived information quality. Furthermore, susceptibility to scarcity or the ability to lose something was also found to substantially influence perceived information quality. Finally, millennials' degree of liking has a positive influence on their perception of companies' information quality on social media. The study also found that a higher perception of information quality leads to increased purchase intentions for this segment.

Furthermore, the findings indicate that perceived information quality mediates three of the persuasion dimensions examined in this study. This means that perceived information quality resulting from authority, scarcity, and liking leads to increased purchase intentions among millennial consumers.

Regarding the moderating effect of demographic variables, namely, gender and educational level, the study results are mixed. For gender, the impact of commitment/consistency and social proof on perceived information quality is higher for male millennials, while the impact of authority is higher for female millennials. The

findings reported no moderating effect among males and females regarding reciprocity, scarcity, and liking. Educational level was also found to significantly moderate the relationship between social proof authority and perceived information quality. For more educated millennials, the impact of social proof on perceived information quality is statistically higher. This means that more educated millennials have a higher likelihood of considering the information quality when the social proof element exists. For less-educated millennials, the impact of authority figures moderates the relationship. Furthermore, education was found to have no moderating effect on reciprocity, commitment/consistency, scarcity, and liking.

Neither gender nor education moderates the relationship between scarcity and perceived information quality. Signifying that, regardless of the millennial's demographics, scarcity has a constant effect on perceived information quality. The same is the case for the connection between liking and perceived information quality. Irrespective of their demographic traits, namely, gender and education, millennials have a higher perception of information quality provided by companies they like on social media. Finally, neither a direct nor moderating effect was found on the relationship between reciprocity and perceived information quality. Considering these direct, mediating, and moderating effects together, this study's outcomes offer a more advanced knowledge of the impact of persuasion dimensions on millennials' decision-making processes.

5.4 Limitations

This study has certain limitations. First, it did not focus on a specific product category or sector. Although this will allow more generalizability to product categories, considering specific products could provide more in-depth information to marketing managers.

Persuasion can be applied to marketing activities in various market segments. Therefore, future studies should consider applying the current study's conceptual model to investigate millennials purchase intentions of other specific categories.

Second, the study did not consider cultural differences. Cross-cultural research illustrates that the message receivers' cultural background significantly affects how they perceive different persuasive messages (Aaker & Williams, 1998; Han & Shavitt, 1994; Khaled, Noble, & Biddle, 2005). The respondents were people from different cultures and backgrounds, including local nationals and expats living in the State of Qatar. Culture plays an influential role in shaping people's attitudes and behaviors. Moreover, some persuasion strategies could be effective on people of a certain culture, while others could be ineffective on people of another culture (Khaled, Noble, & Biddle, 2005; Tansey, Hyman, & Zinkhan, 1990). Thus, these cultural differences may impact susceptibility to persuasion dimensions, perceived information quality, and consequently purchase intention, the variables examined in his study. Therefore, millennials may vary in purchasing products on social media due to persuasion and information quality based on the influence of their culture.

Third, the study considered one social media platform (Instagram), which is highly used for pictures and visuals. Studies have suggested that pictures or tangible information improve cognitive elaboration (Kisielius & Sternthal, 1984, 1986; Petrova & Cialdini, 2005), perhaps considering the quality of the information in terms of visuals could mediate the relationship between persuasion dimensions and purchase intentions.

Finally, even though the survey language had no effect on responses, one limitation could be related to the survey's language. The survey was distributed in the English language, but considering that the study was conducted in the State of Qatar, where the

primary language is Arabic, it would have been more appealing to the respondents having the survey in their mother tongue.

5.5 Future Research

Future studies could include focusing on a particular product category or sector, as well as considering comparing across these categories or sectors. The conceptual model could be replicated to investigate millennials' susceptibility to persuasion on perceived information quality and purchase intentions of specific categories and sectors.

Because this study did not consider cultural differences, future studies could include culture as a moderating variable in the conceptual model. Cultural differences may influence susceptibility to persuasion by interacting with the six persuasion dimensions. Further, considering their potential moderating effects, future studies might also consider cultural differences as direct drivers of influencing perceived information quality.

Additionally, the study only focused on persuasion dimensions presented by Cialdini (1993, 1994) because they are universally established persuasive dimensions and found wide application in the marketing field, as well as wide acceptance in the online persuasion context (Oyibo, Orji & Vassileva, 2017; Kaptein et al., 2012). However, examining persuasion dimensions other than the ones developed by Cialdini (1993, 1994) on perceived information quality and purchase intentions among millennials could draw further conclusions related to persuasion among this segment. Accordingly, future research may consider other persuasion techniques, such as the seven tools developed by Fogg (2003), namely reduction, surveillance, tunneling, customization/tailoring, suggestion, conditioning, and self-monitoring.

Furthermore, the study considered information quality as a mediator between persuasion dimensions and purchase intentions. Future research could consider information quality in terms of visuals and examine their mediating effect in the conceptual model, which means replicating the same model using visuals as the source of information.

Moreover, the current study focused on millennials; future research could consider other generations, such as Gen-Z (2003–2010). This generation comprises the new digital natives, so their susceptibility to persuasion and their ability to evaluate the quality of information quality on social media could be of interest for further investigation. Therefore, future research can replicate the conceptual model while considering this generation.

Finally, future research may consider integrating brand meaning, brand love, and brand commitment as a mediator in the relationship between the persuasion dimensions and purchase intention among millennials.

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APPENDIX

Appendix A: Questionnaire

For each statement please mark (X) in the box which best indicates your level of agreement or disagreement with the following statements

Section 1	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Neutral (4)	Agree (5)	Strongly Agree (6)	Very Strongly Agree (7)
Persuasion (Kaptein, Ruyter, Markopoulos & Aarts 2012)							
1.1 Reciprocity							
When a family member does me a favor, I am very inclined to return this favor.							
I always pay back a favor.							
If someone does something for me, I try to do something of similar value to repay the favor.							
When I receive a gift, I feel obliged to return a gift.							
When someone helps me with my work, I try to pay them back							
1.2 Commitment/ Consistency							
Whenever I commit to an appointment, I always follow through.							
I try to do everything I have promised to do.							
When I make plans, I commit to them by writing them down.							

Telling friends about my future plans helps me to carry them out.							
Once I have committed to do something, I will surely do it.							
If I miss an appointment, I always make it up.							
1.3 Social Proof							
If someone from my social network recommends a product, I tend to try it.							
When I am in a new situation, I look at others to see what I should do.							
I will do something as long as I know there are others doing it too.							
I often rely on other people to know what I should do.							
It is important to me to fit in.							
1.4 Authority							
I always follow advice from experts.							
When a professional tells me something, I tend to believe it is true.							
I am very inclined to listen to authority figures.							
I always obey directions from my superiors							
I am more inclined to listen to an authority figure than a peer.							
I am more likely to do something if told, than when asked.							
1.5 Scarcity							

I believe rare (scarce) products are more valuable than mass products.							
When my favorite shop is about to close, I would visit it since it is my last chance.							
I would feel good if I was the last person to be able to buy something.							
When my favorite brand is almost out of stock, I buy two.							
Products that are hard to get represent a special value.							
1.6 Liking							
I like to take advice from my social network.							
When I like someone, I am more inclined to believe him or her.							
I will do a favor for people that I like.							
The opinions of friends are more important than the opinions of others.							
If I am unsure, I will usually side with someone I like.							

Please consider companies` information/materials about their products/services on your Instagram platform. For each statement please mark (X) in the box which best indicates your level of agreement or disagreement with the following statements							
Section 2	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Neutral (4)	Agree (5)	Strongly Agree (6)	Very Strongly Agree (7)
Perceived Information Quality (Park et al.,, 2007; Bailey & Pearson ,1983)							
Information/materials provided by the company on Instagram are clear.							

Information/materials provided by the company on Instagram are understandable							
Information/materials provided by the company on Instagram are helpful.							
Information/materials provided by the company on Instagram are credible							
Information/materials provided by the company on Instagram have sufficient reasons supporting the opinions							
In general, the quality of information/materials provided by companies on Instagram is high.							

Section 3	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Neutral (4)	Agree (5)	Strongly Agree (6)	Very Strongly Agree (7)
Purchase Intention (Baker and Churchill, 1977)							
After reading online information/materials provided by a company on Instagram it makes me desire to purchase the product/service.							
I intend to seek products whose information/materials are provided on my own Instagram social network.							
I intend to visit the company's page on Instagram after reading the information/materials provided by them.							
In the future, I may consider the company featured on my Instagram social network as my first choice.							
I will consider buying the product after I have							

Section 4

Please provide the following information about yourself

Gender:

- A- Male
- B- Female

Age:

- A- 20 to 39
- B- 40 to 64
- C- 65 or older

Highest educational qualification:

- A- High School
- B- Bachelor's Degree
- C- Master's Degree
- D- Ph.D. or higher