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Antecedents to Para Social Relationship and its Moderating Effect on Purchase Intention and eWOM

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Abstract

Our study extended the UGT Theory and proposed seven direct and two moderating hypotheses. The study focused on the upper-middle-class segment of Karachi. It examined the effects of self-esteem, loneliness, and introversion on parasocial relationships. The impact of persuasion knowledge on purchase intention and negative eWOM communication and the effect of the parasocial relationship on purchase intention and negative eWOM communication. The study also examined the moderating role of parasocial relationships on purchase intention and negative eWOM communication. The study found that self-esteem, loneliness, and introversion positively affect parasocial relationships. Persuasion knowledge significantly affects purchase intention and negative eWOM communication. However, the directions in these hypotheses are positive compared to the negative directions proposed in the hypotheses. Parasocial relationships positively affect purchase intention and negative eWOM intention. Contrarily, the study proposed that these relationships are negatively associated.

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The study also documents that parasocial relationships insignificantly moderate (i) persuasion knowledge and purchase intention and (ii) persuasion knowledge and negative eWOM communication. These findings suggest that social media influencers can significantly improve consumers' attitudes towards a brand by enhancing parasocial relationships. This, in turn, enhances purchases and reduces negative eWOM intentions. We suggest that when collaborating with digital celebrities, marketers must ensure that the firm's image aligns with the celebrities' image. We also recommend that marketers develop long-term associations with celebrities rather than short-term relationships. We also found that individuals with low self-esteem, loneliness, and introversion are more comfortable interacting on social media. Thus, we propose that social media influencers target individuals with these characteristics.

Keywords: *Parasocial knowledge, persuasion knowledge, purchase intentions, eWOM intentions, Self-esteem, loneliness, and introversion.*

Introduction

In the prevailing digital era, the number of social network sites has increased significantly, and many researchers believe that they are essential tools for digital advertisement (Xue et al., 2023). Consumer perception of online advertising is that it is more informative and trustworthy than conventional advertising. As a result, it positively affects consumer attitudes and purchase intentions towards goods and services (Nazir et al., 2023). Similarly, Gambo and Özad (2020) assert that the growth of Social Network Sites (SNS) have significantly increased in recent years due to easy internet access worldwide (Gambo& Özad, 2020). Furthermore, Zaib-Abbasi et al. (2023) argue that SNS directly connects with consumers. Therefore, firms worldwide have started investing significant resources in social media (Alghizzawi et al., 2023).

Extant literature documents that with the growth of SNS, new types of celebrity groups have emerged, including "bloggers and Instagram-celebrities" (Kujur & Singh, 2020). The conceptualization of traditional and digital celebrities differs (Nazir et al., 2023). Tradition celebrities gained fame and popularity by appearing in conventional mediums, while digital celebrities became famous using "online blogging and vlogging on SNS" (Zaib-Abbasi et al., 2023). Moreover, Gawer (2022) asserts that digital celebrities are those individuals who have profound social influence due to large numbers of followers (Purohi & Arora, 2022).

In developing and developed countries, digital influencers like "bloggers, self-made anchors, YouTubers, and TikTokers have grown significantly in recent years. These digital influencers compete for attention, views, likes, and comments (Boerman et al.,

2023). In this context, researchers believe that digital platforms provide diverse, useful information to consumers. On the other hand, consumers often, without verifying the information, create stories that adversely affect the reputation of individuals, institutions, and political parties (Al-Billeh, 2023). Moreover, social media have made it convenient for individuals to become content creators and broadcasters for sharing their diverse perceptions about goods and services and individuals (Balaban & Szambolics, 2022). This empowerment allows individuals to influence other social media users' attitudes and behaviors. Furthermore, Jumah and Nthiga (2022) assert that with this discussed power also comes great responsibility, which many social media influencers are not adhering to by following ethical standards (Servaes, 2022).
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Researchers assert that celebrity endorsement through social media is more efficient in changing consumers' attitudes and behavior toward a brand (Jin et al., 2019). Therefore, firms collaborate with social media influencers to market their products and services to the target segments (Tanwar et al., 2022). Unlike celebrities, social media influencers develop trustful and sustainable relationships with followers (Hudders et al., 2021). As a result, their followers are attentive to the brands they recommend. Since social media influencers are domain experts (Ye et al., 2021), social media users contact them for advice on goods and services. Besides creating brand awareness, social media influencers help increase brand awareness, commitment, and sales revenue (Zhou et al., 2021). Many past studies on influencer marketing are available, which helps in understanding how consumers respond to the persuasive content of social media influencers (Nafees et al., 2021). Moreover, extant literature suggests that social media influencers' "trustworthiness, expertise, attractiveness and homophily" positively affect brand trust (Reinikainen et al., 2020). In the same context, researchers believe the parasocial relationship promotes engagement and purchase intention and generates word-of-mouth communication (Onofrei et al., 2022). Although firms realize the importance of integrating SNS into their marketing strategies, for many firms, it is a big challenge (Wei et al., 2022).

We found a dearth of literature on the effects of parasocial relationships on purchase intention and word-of-mouth communication (Zhou et al., 2023). In the same context, we found limited studies on the effect of persuasion knowledge on purchase intention and word-of-mouth communication. Moreover, we found of a few studies examining the effect of three social media characteristics (i.e., self-esteem, loneliness, and introversion) on parasocial relationships (Yuan & Lou, 2020).

Given the above discussion, the study has formulated the following research questions:

1. How does "self-esteem, loneliness, and introversion affect parasocial relationships?"

2. How does "persuasion knowledge affect purchase intention and negative eWOM communication?"

3. How does a "parasocial relationship affect purchase intention and negative eWOM communication?"

4. What is the moderating effect of the "parasocial relationship on (i) persuasion knowledge and purchase intention and (ii) persuasion knowledge and negative eWOM intention?"

Literature Review

Parasocial Relationship

The parasocial relationship is a "unilateral relationship which social media users develop with celebrities (Grech & Ellul, 2021). This imaginary relationship resembles real-world interpersonal relationships (Kim et al., 2023). A parasocial relationship is a pseudo-friendship, which many researchers believe is more of a convenience companionship (Lacap et al., 2024). However, many consumers in this social relationship consider television and social media celebrities as friends or colleagues (Tatem& Ingram, 2022). Since this relationship is an essential concept in media literature, many studies have examined it with different antecedents and consequences in different domains (Baek et al., 2013). Moreover, many studies are available on parasocial relationships in conventional media like television and radio, but a few are available on parasocial relationships in social media (Venciute et al., 2023). Furthermore, extant literature highlights that the parasocial relationship between social media users and celebrities helps understand the attitudes and behaviors of SNS users (Flecha-Ortiz et al., 2023; Nah, 2022).

Similarly, Sharabati et al. (2022) assert that online communities and search engines help SNS users identify celebrities with similar personalities and interests. Therefore, they develop friendships and intimacy with such personalities (Venciute et al., 2023). The influence of these parasocial relationships is not limited to emotional connections but also extends to cognitive behavior. Moreover, researchers believe celebrities' recommendations of goods and services affect followers' attitudes and behaviors toward such goods and services (Molano-Acevedo et al., 2022).

Purchase Intention

Purchase intention is a consumer's intention to buy a good or service shortly. Consumer purchase intention is often their qualitative and subject judgment, which may vary from consumer to consumer (Narayanan et al., 2022). It is also an essential precursor of purchase behavior (Jung et al., 2022). Many factors influence consumer purchase intentions, including the quality of content shared by celebrities, users' trust, and the similarity between users and social media celebrities (Onofrei et al., 2022). Moreover, Dalziel (2024) argues that compared to conventional celebrities, digital celebrities have a stronger influence on female consumers aged 18 to 30 years because these female perceive that SNS celebrities are trustworthy and are socially close to them. Furthermore the Theory of Reasoned Action postulates that purchase intention significantly depends on consumers' subjective norms and attitudes. Subjective norms relate to the influence of peers and families, while attitude is consumers' enduring perception of a good, service, or person (Van-Nguyen et al., 2024).

eWoM

Word-of-mouth communication is the oldest way to convey information (Rani et al., 2022). Researchers have operationalized WOM differently from different perspectives (Roy et al., 2023). For example, many researchers believe that it relates to the exchange of market-related information between consumers. This exchange process changes consumers' attitudes and behaviors (Nilashi et al., 2022). With the advent and popularity of the internet and social media forums, a new form of online communication, commonly known as electronic word of mouth (eWOM) (Gvili & Levy, 2023), has emerged. Like word of mouth, researchers have operationalized eWOM differently (Duffett, 2022). One commonly accepted definition of eWOM is all information and communication shared on social media that could influence consumers' attitudes and behaviors toward goods, services, and persons (Xiao et al., 2022). One of the advantages of this marketing tool is that all consumers with internet access can share and access information related to goods and services (Verma et al., 2023). Given its importance, many firms now use eWOM to market their products and services because it is efficient, less costly, and has a wider reach than conventional marketing tools (Nilashi et al., 2022). Researchers have divided online consumers into active and passive users (Roy et al., 2023). Active consumers are more involved in sharing their views about goods and services in social media, while passive consumers focus on accessing information others post in social media forums (Duffett, 2022).

Self Esteem

The Sociometer Theory of Self-Esteem postulates that self-esteem helps individuals understand how others socially accept them (Mukhopadhyay et al., 2023; Pang et al.,

2024). The theory postulates that individuals have the natural urge to develop and maintain social relationships. Moreover, Brown et al. (2015) argue that self-esteem tracks the individual's relational value (i.e., value to other people) and motivates them to enhance it. Furthermore, extant literature cites that individuals with low social acceptance often have low self-esteem (Mukhopadhyay et al., 2023). Thus, we argue that individuals with high self-esteem are highly motivated, and their quality of life is better than low self-esteem individuals (Abbas et al., 2023). In the same context, researchers believe a balance between low and high self-esteem is desirable (Susilowati & Tukiran, 2024). Individuals with low self-esteem are unsure about their abilities and often have low motivation to try new things and reach their goals (Salmiah et al., 2024). In contrast, individuals with high self-esteem overestimate their abilities and often fail to achieve their goals (Qahri-Saremi & Montazemi, 2019). Such individuals struggle with relational issues and block themselves from improving because they are too myopic (Pang et al., 2024).

Introversion

Carl Jung coined introversion, which suggests "an inwards orientation to one's mental life rather than the outward orientation to social life" (Dadaian, 2022). Introversion is a personality trait that focuses on "inner thought rather than what is happening externally" (Liegl & Furtner, 2023). The big five dimensions, besides other traits, include "introversion and extroversion, which are two extremes on a continuum" (Akbari et al., 2023). Unlike extroverts, introverts "enjoy subdued and solitary experiences" (Zulfiqar et al., 2023). Introverts prefer one-to-one interaction and avoid crowds (Sharma & Behl, 2022). Moreover, extant literature documents that introverted brains are not receptive to new and novel ideas, which leads to "dopamine," a physiological term associated with rewards (Zhou et al., 2022). Furthermore, extant literature suggests most individuals are neither purely introverts nor purely extroverts (Liegl & Furtner, 2023) but have the characteristics of both traits, known as "ambiverts" (Akbari et al., 2023). Thus, we argue that individuals adopt introvert traits in one situation and extrovert traits in another.

Loneliness

Loneness is "a distressing feeling of being alone or separated" (Mann et al., 2022). Barreto et al. (2022) suggest that some individuals, despite being with others throughout the day, still experience loneliness (Houghton et al., 2022). Researchers have divided loneliness into social and emotional categories (Akhter-Khan et al., 2023). Individuals have little social contact and few people to interact with in social loneliness. Such individuals often feel alone despite being with other people. At the same time, emotional loneliness refers to a "perception of the lack of a close, intimate attachment to another person" (Houghton et al., 2022).

Persuasion Knowledge

Persuasion knowledge refers to "consumers' knowledge and beliefs of various advertising-related issues." It also helps consumers understand how marketers try to persuade them to buy a product or service. Consequently, consumers learn how to "cope with the persuasion tactics used by marketers" (Boerman et al., 2017). Regulations mandate that all commercials provide explicit information to consumers (Filieri et al., 2023). Thus, disclosing all the information related to advertising in social and conventional media increases consumers' persuasion knowledge (Tabassum et al., 2020). As a result, consumers are in a better position to cope with the persuasion tactics of marketers. Moreover, many researchers believe that firm-sponsored social network content is less persuasive, negatively affecting consumers' purchase intention and eWOM communication (Zhai et al., 2022).

Hypothesis Development

Self-Esteem and Parasocial Relationship

Self-esteem is about an individual's self-worth (Khan et al., 2023). Unlike past studies, this study has used self-esteem as an antecedent to parasocial relationships (Weru, 2023). For example, Paravati et al. (2022) found that parasocial interaction enhances self-esteem. Similarly, Hua and Xiao (2023) maintain that parasocial relationships shape individuals' self-esteem (Stein et al., 2022). There are many studies on self-esteem and parasocial relationships, but they found inconclusive results (MacNeill & DiTommaso, 2023). For example, some studies found a positive association between self-esteem and parasocial relationships, while others documented an insignificant association between self-esteem and parasocial relationships (Khan et al., 2023). Arakaki, 2022). Similarly, Hua and Xiao (2023) assert that parasocial relationships and self-esteem are bi-directional. That is, parascoal relationships promote self-esteem, and self-esteem enhances parasocial relationships (Abbasi et al., 2023). The existing literature also points out that individuals' self-esteem can influence their perception of parasocial relationships (Lacap et al., 2024). Moreover, many studies have extended the Self-Verification Theory and concluded that self-esteem promotes parasocial relationships (Koay et al., 2024; Arakaki, 2022).

H1. Self-esteem is "positively related to parasocial relationships with celebrities."

Loneliness and Parasocial Relationship

Loneliness is "a distressing feeling of being alone or separated" (Mann et al., 2022). Individuals with high social loneliness often have non-satisfactory relationships with individuals and the community (Andriani et al., 2023). As a result, they use social

media to compensate for their social needs (Stein et al., 2022). Similarly, extant literature cites that lonely individuals perceive SNS as a useful medium for satisfying their interpersonal needs. Consequently, lonely individuals become obsessive users of SNS (Bond, 2022). Moreover, lonely individuals are more comfortable on social media (Arora, 2022). Therefore, they are likelier to develop parasocial relationships with social media influencers. Furthermore, studies cite that lonely adolescents use parasocial relationships to compensate for their social isolation (Woznicki et al., 2021). Similarly, studies on old consumers reveal that old consumers are often lonely. Therefore, they develop parasocial relationships with social media influencers to compensate for the loneliness (Hu et al., 2022). Furthermore, research on females and males indicates that older females and young males are often lonely and are more susceptible to forming parasocial relationships (Sherrick et al., 2022; Yang et al., 2023).

H2: Loneliness positively affects parasocial relationships with digital celebrities.

Introversion and Parasocial Relationship

Introversion and extroversion are two personality traits (Gao et al., 2023). Introversion persons are "inwardly oriented." Such individuals are often quiet, prefer solitary activities like social media, and do not enjoy social interaction with crowds (Naidu et al., 2022). In contrast, extroverts "are oriented toward the world outside themselves" (Javed et al., 2022). Such individuals are "optimistic, enjoy noise and activity, and are not prone to self-reflection" (McLaughlin & Wohn, 2021). Moreover, extant literature cites that introverted persons, due to shyness, are more attractive to parasocial relationships, as these relationships require few social demands (Ly et al., 2022).

Furthermore, studies cite that shy and lonely people in parasocial relationships do not experience discomfort interacting with others in SNS (Ermeç, 2022). Thus, we argue that isolated and lonely persons fulfill their social interaction needs by developing intimate relationships with celebrities on social media forums (Gao et al., 2023). Past and existing literature found contradictory results on the association of "introverts and parasocial relationships." Past studies indicate a weak association between loneliness and parasocial relationships, but recent literature documents a significant positive association "between loneliness and parasocial relationships" (Jones et al., 2022).

H3: Introversion is "positively associated with the parasocial relationship."

Persuasion Knowledge Purchase Intention

Persuasion knowledge is not a new concept; it was developed by Friestad and Wright (1994) about two decades ago (Myers et al., 2024). Many past studies have examined

persuasion knowledge from different perspectives. For example, some researchers examined how consumers develop persuasion knowledge (Alhaidar & Xue, 2023), while other studies examined how consumers use persuasion knowledge. Researchers believe that persuasion knowledge increases "consumers' coping responses and leads to less favorable evaluations" (Huang et al., 2023). In the context of persuasion knowledge, researchers found mixed results regarding its direction and strength (Myers et al., 2024). For example, a few studies found that, in some cases, persuasion knowledge promotes positive evaluations, while other studies document that persuasion knowledge leads to negative evaluations (Huang et al., 2023; Myers et al., 2024). Moreover, studies have also found that a better understanding of persuasion knowledge benefits consumers and marketers (Alhaidar & Xue, 2023). It helps consumers make the right decisions and helps marketers develop appropriate marketing strategies (Huang et al., 2023).

H4: Persuasion knowledge "negatively affects followers' purchase intention."

Persuasion Knowledge and eWOM Intention

Many studies have examined the association between persuasion knowledge and eWOM intention, with varying results. For example, Rani et al. (2022) found that persuasion knowledge reduces the effectiveness of persuasive messages, leading to negative effects on consumers' eWOM communication. Thus, we argue that consumers with high persuasive knowledge understand firms' strategies and tactics in social media communication (Yones & Muthaiyah, 2023). Therefore, they buy less and are unwilling to generate positive eWOM communication (Ermeç, 2022). Similarly, many researchers assert that consumers do not generate negative eWOM communication if they believe that social media forums are trustworthy and have high persuasion skills (Putri, 2022).

Moreover, studies document that advertisement that use "creative or non-traditional" strategies in their messages enhance consumers' persuasion knowledge (Upadhyay & Tripathi, 2023). As a result, they generate negative eWOM communication. Furthermore, Alhaidar and Xue (2023) assert that social media influencers mix commercial and non-commercial content in their messages, which consumers often cannot distinguish. As a result, such content adversely affects users' persuasion knowledge, leading to negative eWOM communication (Putri, 2022).

H5: Persuasion knowledge" negatively affects followers' negative eWOM intention."

Parasocial Relationship, Purchase Intention, and eWOM Intention

A parasocial relationship is a "unilateral relationship which social media users develop with celebrities (Grech & Ellul, 2021). This imaginary relationship resembles real-world

interpersonal relationships like pseudo-friendship (Kim et al., 2023). Researchers believe a pseudo-friendship significantly affects purchase intention and eWOM communication (Lacap et al., 2024). Moreover, many consumers in this social relationship consider television and social media celebrities as their friends or colleagues. Therefore, their recommendation affects their purchase and eWOM intentions (Tatem & Ingram, 2022). Furthermore, many studies found that when social media influencers share their personal information, it enhances parasocial relationships, positively affecting purchase and eWOM intentions (Shen et al., 2022). Similarly, many studies document that social media influencers' contents promote the parasocial relationship between "social media users and followers" (Balaban et al., 2022). As a result, consumers' purchase intention and eWOMs increase profoundly. Thus, we argue that consumers often perceive social media influencers as trustworthy and credible, so they develop parasocial relationships with the consumers, leading to positive attitudes toward recommended brands.

H6: Parasocial Relationship "positively affects followers' purchase intention."

H7: Parasocial Relationship" positively affects followers' negative eWOM intention."

Moderating Effects

Followers of digital celebrities are friendlier with celebrities, which leads to strong parasocial relationships (Klostermann et al., 2023). Therefore, they find it difficult to distinguish between commercial and non-commercial content (Nepomuceno et al., 2020). As a result, it has varying effects on purchase intention and eWOM communication. On the contrary, some followers perceive digital celebrities as authentic. Therefore, such followers are more satisfied with the products and services recommended by celebrities (Fan et al., 2023). Moreover, Odoom (2023) asserts that parasocial relationships increase the effects of persuasion. In contrast, researchers believe that disclosure of content in advertisements reduces consumers' persuasion, leading to negative attitudes toward the brands recommended by social media influencers. At the same time, researchers believe that when celebrities disclose information about being sponsored by a brand and firm in their SNS posts, consumers' trust in those celebrities increases. In such cases, consumers believe the celebrities are authentic and credible (Klostermann et al., 2023). In this context, past studies document that most consumers believe those celebrity advertisements are non-commercial because of their parasocial relationship with celebrities (De Keyzer, 2023).

H8: Parasocial relationship "moderates persuasion knowledge and purchase intention."

H9: Parasocial relationship "moderates persuasion knowledge and negative eWOM intention."

Conceptual Framework

We have depicted the conceptual framework in Figure 2. It has nine relationships, seven direct and two moderating.
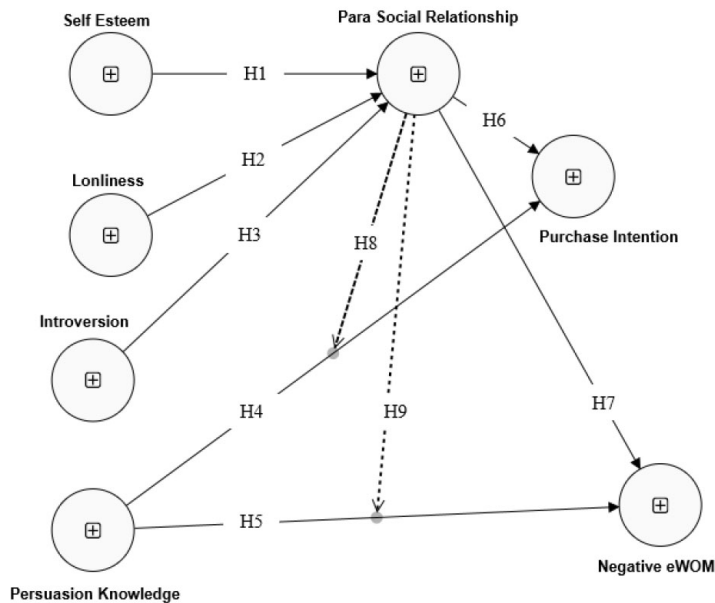
Figure 2: Conceptual Framework

Methods

Research Design

A research design helps researchers achieve research objectives. It includes how researchers have collected the data and the scales and measures used for collecting the data. It also includes the type of research and statistical analysis researchers have adopted to achieve their research objectives. The study is cross-sectional since it collected the data from the respondents only once.

Population and Sample Size

Lakens (2022) suggests that in large-scale studies, the researchers must first identify the target population, calculate an appropriate sample size, and use the right sampling technique to draw the sample. The study found that the minimum sample size of 320 would be appropriate for the study (32 indicators X 10 cases) (Hair Jr et al., 2017). However, to increase the generalizability of the study, we distributed 450 questionnaires and received 435. A sample frame is necessary for probability sampling. Since it was unavailable, we used the mall intercept method to collect the data. We intercepted the respondents in the four leading malls of Karachi on different days and times. Since our

target audience is well conversant in English, we did not translate the questionnaire into our local language, *Urdu*.

Pilot Test

The study adopted questionnaires developed in Western countries. Therefore, it is necessary to pre-test it to ascertain whether any of the items used in the scales are contrary to Pakistan's cultural values. As suggested by Lakens (2022), we recruited 30 respondents non-randomly for the pilot test. The recruited respondents filled out the questionnaire and observed that none of the items contradicted Pakistan's cultural values. The recruited respondents also reported that they did not face any issues in understanding the content and wording of the questionnaire. Based on the data for the pilot study, we examined the reliability and validity of the adopted scales and found they were within the acceptable range.

Scales and Measures

The questionnaire in this study has two sections. Section 1 relates to demographics. All the items in this section are based on a nominal scale (Hair et al., 2020). Section 2 relates to the main study. The items used in this section are based on the "Five-point Likert Scale (Sarstedt et al., 2020), with five suggesting a high agreement and one depicting a low agreement." Table 1 depicts the constructs, the sources of each construct, and the number of items in each construct.

Table 1: Scales and Measures

Constructs	Source	Items
Loneliness	Pittman and Reich (2016)	3
Self Esteem	Heatherton and Polivy (1991)	7
Par Social Relationship	Kim et al. (2015)	6
Persuasion Knowledge	Vashisht and Royne (2016)	5
Purchase Intention	Van Reijmersd al et al.(2016)	4
EWOM	Su et al. (2016)	3
Introversion	Mowen (2000)	4

Statistical Analysis

Various statistical tools are available for analysis, including SPSS and Smart PLS. Both tools have different benefits (Manley et al., 2020). We have used Smart PLS Version 4.1, which is more user-friendly and can test different regression equations simultaneously. As suggested, we adopted a two-step approach in the Smart PLS. We initially "generated a measurement model for results related to reliability and validity. In step two, we generated a "structural model for hypotheses results."

Results

Respondents Profile

This study collected data from 435 respondents using the mall intercept method. Table 2 shows the profile of the respondents.

Table 2: Respondents Profile

Demographic	Category	Percentage
Age	16 to 25 Years	18%
	26 to 35 Years	25%
	36-45 Years	24%
	46-55 Years	13%
	56 Plus	20%
Gender	Male	67%
	Female	33%
Marital Status	Singe	65%
	Married	45%
Education	Intermediate	42%
	Bachelor Degree	32%
	Master Degree	25%
	Post-Graduation Degree	1%
Income Level	Up to Rs.50000	26%
	Rs.51000 to Rs.75000	20%
	Rs.76000 to Rs.100000	19%
	Rs.101000 to Rs.125000	18%
	Rs.126000 plus	17%

Measurements Model

Figure 3 depicts the measurement model showing the regression weight of the articulated hypotheses.
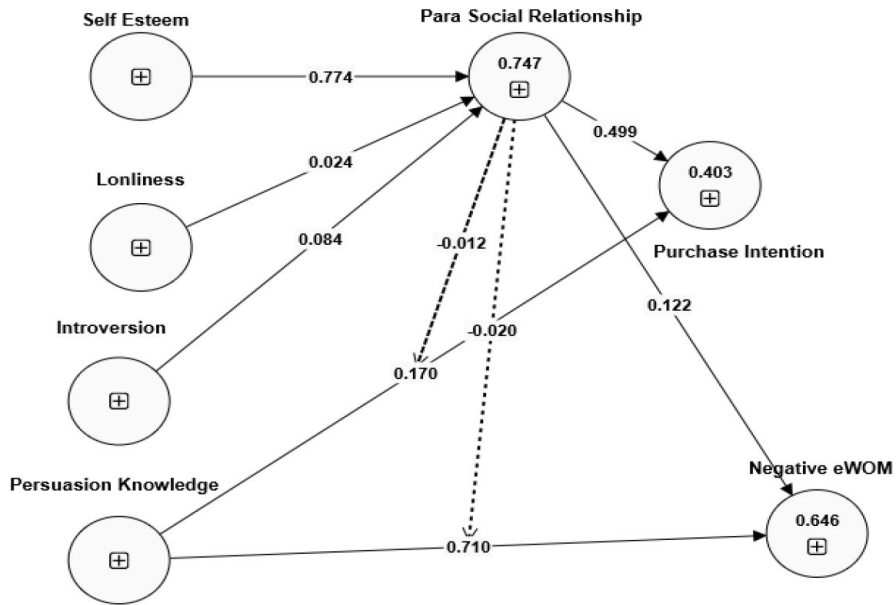
Figure 2: Measurement Model

Descriptive Analysis

In descriptive analysis (Manley et al., 2020), we have examined the "internal consistency of the constructs based on Cronbach's Alpha values and univariate normality (Cheung et al., 2023) based on Skewness (Demir, 2022) and Kurtosis values (Jammalamadaka et al., 2021). Table 3 depicts the summary of the results.

Table 3: Descriptive Analysis

Constructs	Cronbach's Alpha	Mean	SD	Skewness	Kurtosis
Introversion	0.770	3.682	1.444	1.349	2.250
Loneliness	0.856	3.801	1.092	1.285	1.924
Negative eWOM	0.841	4.180	1.860	1.430	2.046
Para Social Relationship	0.871	3.867	1.493	1.198	2.203
Persuasion Knowledge	0.815	4.172	1.828	1.299	1.428
Purchase Intention	0.701	4.039	1.034	1.428	1.362
Self Esteem	0.840	4.112	1.791	1.362	1.999

The results show that all the Cronbach's Alpha (Mator & Khairani, 2020) values are at least 0.701, "suggesting acceptable internal consistency." We also found that all the Skewness and Kurtosis "values are between ± 3.5, suggesting the constructs have adequate univariate normality" (Cheung et al., 2023).

Convergent Validity

Convergent validity (Cheung et al., 2023) shows the "theoretical association between constructs and their indicators." Table 4 shows that all the "composite reliability values are at least 0.704, and AVE values are greater than 0.626, "suggesting that constructs have adequate convergent validity"

Table 4: Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability (rho_a)	The Average Variance Extracted (AVE)
Introversion	0.770	0.795	0.677
Loneliness	0.856	0.857	0.777
Negative eWOM	0.841	0.844	0.759
Para Social Relationship	0.871	0.874	0.722
Persuasion Knowledge	0.815	0.829	0.643
Purchase Intention	0.701	0.704	0.626
Self Esteem	0.840	0.849	0.683

Predictive Power of the Model

Compared to other software, Smart PLS also shows the model's predictive power (Khanthachai & Ringle, 2014). Results in Table 5 show that "R^2 values of the model are at least 0.20, suggesting adequate predictive power of the model."

Table 5: Predictive Power

Constructs	R-Square	R-Square Adjusted
Negative eWOM	0.646	0.644
Para Social Relationship	0.747	0.744
Purchase Intention	0.403	0.401

Discriminant Validity

Researchers suggest that the constructs used in a study must be "conceptually and empirically different" (Sabol et al., 2022). We have ascertained the discriminant validity using Fornell and Larcker's (1981) criteria and HTMT ratio. The results in Table 6 show that "AVE square values exhibited in diagonal lines are greater than Pearson correlation values" (Fornell & Larcker, 1981). Similarly, "Results in Table 7 show HTMT values are less than 0.90 (Demir, 2022). Thus, the discriminant validity of both methods suggests that the "constructs used in the study are unique and empirically different."

Table 6: Discriminant Validity (Fornell & Larckher, 1981)

Constructs	INT	LN	EWOM	PSR	PK	PI	SE
Introversion	1						
Loneliness	0.566	1					
Negative eWOM	0.521	0.418	1				
Para Social Relationship	0.622	0.583	0.542	1			
Persuasion Knowledge	0.592	0.371	0.667	0.604	1		
Purchase Intention	0.471	0.519	0.36	0.489	0.402	1	
Self Esteem	0.685	0.653	0.548	0.743	0.647	0.546	1

Table 7: Discriminant validity HTMT Ratio

| Constructs	INT	LN	EWOM	PSR	PK	PI	SE
Introversion	-						
Loneliness	0.566	0.881					
Negative e WOM	0.521	0.418	0.871				
Para Social Relationship	0.622	0.583	0.542	0.849			
Persuasion Knowledge	0.592	0.371	0.667	0.604	0.802		
Purchase Intention	0.471	0.519	0.36	0.489	0.402	0.791	
Self Esteem	0.685	0.653	0.548	0.743	0.647	0.546	-

Fit Indices

As Khanthachai and Ringle (2014) suggested, we assessed the model's fitness based on "SMR and NFI values." Table 8 shows that "SRMR value is less than 0.08, and NFI value is greater than 0.800, suggesting the measurement model have acceptable fitness" (Bentler, 1990).

Table 8: Fit Indices

Indices	Saturated model	Estimated model
SRMR	0.076	0.079
d_ULS	1.734	2.279
d_G	0.7	0.731
Chi-square	4684.659	4783.486
NFI	0.841	0.832

Structural Model

For structural model, we used bootstrapping by drawing 5000 subsamples randomly from the observed data set. Figure 3 depicts the structural model showing the significance of the articulated hypotheses.
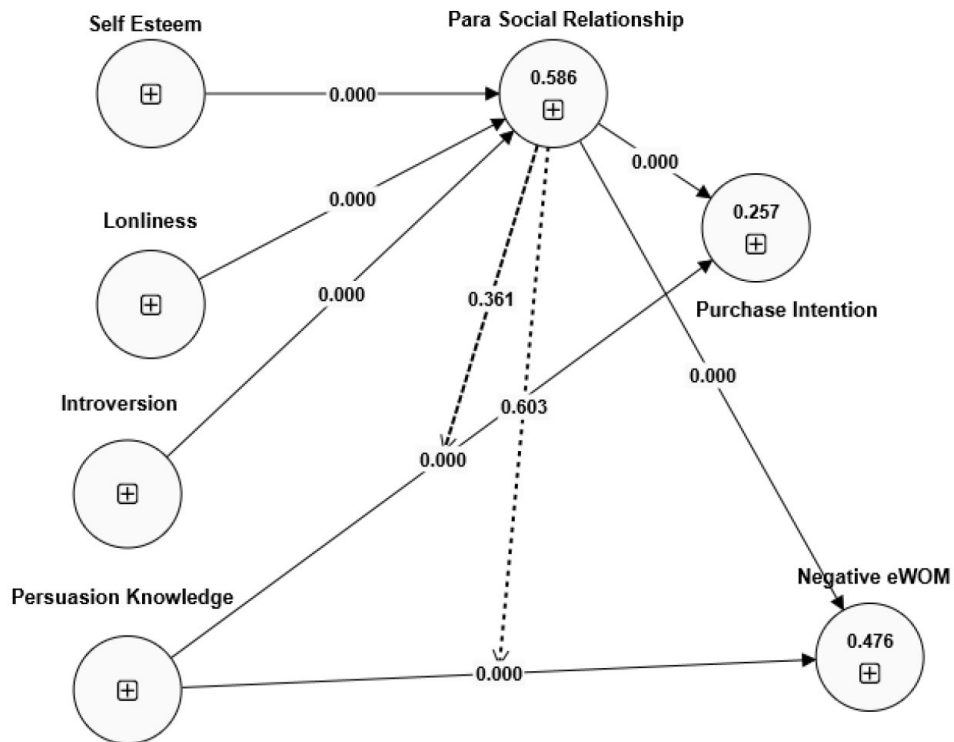
Figure 3: Structural Model

Hypotheses Results

The results in Table 9 show that our study supports five direct hypotheses but does not support two. We did not find support for the two articulated moderating hypotheses as well.

Table 9: Hypothesis Results

Relationships	β statistics	T values	P values	Results
Self Esteem -> Para Social Relationships (H1)	0.774	18.853	0	Accepted
Loneliness -> Para Social Relationship (H2)	0.024	5.135	0	Accepted
Introversion -> Para Social Relationship (H3)	0.084	6.911	0	Accepted
Persuasion Knowledge -> Purchase Intention (H4)	-0.20	5.075	0	Rejected*
Persuasion Knowledge -> Negative eWOM (H5)	0.710	16.876	0	Rejected*
Para Social Relationship -> Purchase Intention (H6)	0.499	11.613	0	Accepted
Para Social Relationship -> Negative eWOM (H7)	0.122	8.698	0	Accepted
Para Soc. Relationship x Pers. Know. -> Pr. Intention (H8)	-0.012	0.914	0.361	Rejected
Para Soc Relationship x Per. Knowledge -> Neg. eWOM (H9)	-0.020	0.520	0.603	Rejected

*Significant, but rejected as the effect is positive contrary to articulated hypotheses

In the context of accepted direct hypotheses, we found that the strongest effect is for Hypothesis 1(β= 0.774, t=18.853< 0.05), followed by Hypothesis 6 (β= 0.499, t=11.613< 0.05), Hypothesis 7(β= 0.122, t=8.698< 0.05), Hypothesis 3 (β= 0.084, t=6.911< 0.05), and Hypothesis 2(β= 0.024, t=5.135< 0.05). Although Hypothesis 4 (β= 0.074, t=5.075< 0.05) and Hypothesis 5 (β= 0.710, t=16.86779< 0.05) have a significant relationship, we have rejected them because the directions in these hypotheses were positive, contrary to what we have hypothesized.

Discussion and Conclusion

Discussion

We accepted Hypothesis 1 (β= 0.774, t=18.853< 0.05), stating, "Self-esteem promotes parasocial relationship." Paravati et al. (2022) found that parasocial interaction enhances self-esteem. Similarly, Hua and Xiao (2023) maintain that parasocial relationships shape individuals' self-esteem (Stein et al., 2022). There are many studies on self-esteem and parasocial relationships, but they found inconclusive results (MacNeill & DiTommaso, 2023). For example, some studies found a positive association between self-esteem and parasocial relationships, while others documented an insignificant association between them (Khan et al., 2023; Arakaki, 2022). Similarly, Hua and Xiao (2023) assert that parasocial relationships and self-esteem are bi-directional. That is, parascoal relationships promote self-esteem, and self-esteem enhances parasocial relationships (Abbasi et al., 2023). The existing literature also points out that individuals' self-esteem can influence their perception of parasocial relationships (Lacap et al., 2024). Moreover, many studies have extended the Self-Verification Theory and concluded that self-esteem promotes parasocial relationships (Koay et al., 2024; Arakaki, 2022).

We accepted Hypothesis 2 (β= 0.024, t=5.135< 0.05), stating, "loneliness positively affects parasocial relationships." Extant literature cites that lonely individuals perceive SNS as a useful medium for satisfying their interpersonal needs. Consequently, lonely individuals become obsessive users of SNS (Bond, 2022). Moreover, lonely individuals are more comfortable on social media (Arora, 2022). Therefore, they are likelier to develop parasocial relationships with social media influencers. Furthermore, studies cite that lonely adolescents use parasocial relationships to compensate for their social isolation (Woznicki et al., 2021). Similarly, studies on old consumers reveal that old consumers are often lonely. Therefore, they develop parasocial relationships with social media influencers to compensate for the loneliness (Hu et al., 2022). Furthermore, research on females and males indicates that older females and young males are often lonely and are more susceptible to forming parasocial relationships (Sherrick et al., 2022; Yang et al., 2023).

The study supported Hypothesis 3(β= 0.084, t=6.911< 0.05), stating, "introversion positively affects the parasocial relationships." Introversion persons are "inwardly oriented." Such individuals are often quiet, prefer solitary activities like social media, and do not enjoy social interaction with crowds (Naidu et al., 2022). In contrast, extroverts "are oriented toward the world outside themselves" (Javed et al., 2022). Such individuals are "optimistic, enjoy noise and activity, and are not prone to self-reflection" (McLaughlin & Wohn, 2021). Moreover, extant literature cites that introverted persons, due to shyness, are more attractive to parasocial relationships, as these relationships require few social demands (Ly et al., 2022). Furthermore, studies cite that shy and lonely people in parasocial relationships do not experience discomfort interacting with others in SNS (Ermeç, 2022). Thus, we argue that isolated and lonely persons fulfill their social interaction needs by developing intimate relationships with celebrities on social media forums (Gao et al., 2023).

The study rejected Hypothesis 4 (β= 0.074, t=5.075< 0.05), stating, "Persuasion knowledge negatively affects purchase intention." Although this relationship is significant, we have rejected it because its positive direction is contrary to what we proposed in the hypothesis. Many past studies have examined persuasion knowledge from different perspectives. For example, some researchers examined how consumers develop persuasion knowledge (Alhaidar & Xue, 2023), while other studies examined how consumers use persuasion knowledge. Researchers believe persuasion knowledge increases "consumers' coping responses and leads to less favorable evaluations" (Huang et al., 2023). In the context of persuasion knowledge, researchers found mixed results regarding its direction and strength (Myers et al., 2024). For example, a few studies found that, in some cases, persuasion knowledge promotes positive evaluations, while

other studies document that persuasion knowledge leads to negative evaluations (Huang et al., 2023; Myers et al., 2024). Moreover, studies have also found that a better understanding of persuasion knowledge benefits consumers and marketers (Alhaidar & Xue, 2023). It helps consumers make the right decisions and helps marketers develop appropriate marketing strategies (Huang et al., 2023).

Similarly, we rejected Hypothesis 5 (β= 0.710, t=16.976) < 0.05), stating, "Persuasion knowledge negatively affects eWOM intention." We rejected this hypothesis as its direction is contrary to what we have articulated. Many studies have examined the association between persuasion knowledge and eWOM intention, with varying results. For example, Rani et al. (2022) found that persuasion knowledge reduces the effectiveness of persuasive messages, leading to negative effects on consumers' eWOM communication. Thus, we argue that consumers with high persuasive knowledge understand firms' strategies and tactics in social media communication (Yones & Muthaiyah, 2023). Therefore, they buy less and are unwilling to generate positive eWOM communication (Ermeç, 2022). Similarly, many researchers assert that consumers do not generate negative eWOM communication if they believe that social media influencers are trustworthy and have high persuasion skills (Putri, 2022).

The study accepted Hypothesis 6 (β= 0.499, t=11.613< 0.05), stating that "parasocial relationship positively affects purchase intention." Similarly, we accepted Hypothesis 7 (β= 0.122, t=8.698< 0.05), stating "parasocial relationship positively affects negative eWOM." A parasocial relationship is a "unilateral relationship which social media users develop with celebrities (Grech & Ellul, 2021). This imaginary relationship resembles real-world interpersonal relationships like pseudo-friendship (Kim et al., 2023). Researchers believe a pseudo-friendship significantly affects purchase intention and eWOM communication (Lacap et al., 2024). Moreover, many consumers in this social relationship consider television and social media celebrities as their friends or colleagues. Therefore, their recommendation affects their purchase and eWOM intentions (Tatem & Ingram, 2022). Furthermore, many studies found that when social media influencers share their personal information, it enhances parasocial relationships, positively affecting purchase and eWOM intentions (Shen et al., 2022). Similarly, many studies document that social media influencers' contents promote the parasocial relationship between "social media users and followers" (Balaban et al., 2022). As a result, consumers' purchase intention and eWOMs increase profoundly. Thus, we argue that consumers often perceive social media influencers as trustworthy and credible, so they develop parasocial relationships with the consumers, leading to positive attitudes toward recommended brands.

The study rejected Hypothesis 8 (β= -0.012, t=0.914> 0.05), stating that "parasocial

relationship moderates persuasion knowledge and purchase intention." The study also rejected Hypothesis 9 (β= -0.020, t=0.520> 0.05), stating that "parasocial relationship moderates persuasion knowledge and negative eWOM intention." Followers of digital celebrities are friendlier with celebrities, which leads to strong parasocial relationships (Klostermann et al., 2023). Therefore, they find it difficult to distinguish between commercial and non-commercial content (Nepomuceno et al., 2020). As a result, it has varying effects on purchase intention and eWOM communication. On the contrary, some followers perceive digital celebrities as authentic. Therefore, such followers are more satisfied with the products and services recommended by celebrities (Fan et al., 2023). Moreover, Odoom (2023) asserts that parasocial relationships increase the effects of persuasion. In contrast, researchers believe that disclosure of content in advertisements reduces consumers' persuasion, leading to negative attitudes toward the brands recommended by social media influencers. At the same time, researchers believe that when celebrities disclose information about being sponsored by a brand and firm in their SNS posts, consumers' trust in those celebrities increases. In such cases, consumers believe the celebrities are authentic and credible (Klostermann et al., 2023). In this context, past studies document that most consumers believe those celebrity advertisements are non-commercial because of their parasocial relationship with celebrities (De Keyzer, 2023).

Conclusion

With the popularity of social media, digital celebrities have become an important tool for changing consumers' attitudes and behaviors toward goods and services. Digital social media influencers promote parasocial relationships and knowledge of persuasion, affecting purchase intention and eWOM communication. The study examined the effects of self-esteem, loneliness, and introversion on parasocial relationships. The effect of persuasion knowledge on purchase intention and eWOM communication. The impact of the parasocial relationship on purchase intention and negative eWOM communication. The moderating effect of parasocial relationship. The study found that self-esteem, loneliness, and introversion positively affect parasocial relationships. Persuasion knowledge significantly affects purchase intention and negative eWOM communication. However, the directions in these two hypotheses are positive, contrary to what we proposed in the hypotheses. We also found parasocial relationships significantly affect purchase intention and negative eWOM intentions. Parasocial relationships insignificantly moderate (i) persuasion knowledge and purchase intention and (ii) persuasive and negative eWOM communication.

Implications

SNS users often cannot distinguish between the firms' sponsored and non-commercial shared content. Therefore, we suggest that regulations related to "disclosure of advertisements or sponsorship in SNS" be enforced. Marketers must provide relevant information related to products and services, as it enhances parasocial relationships. Moreover, it increases the credibility of social media influencers, enhancing purchase and eWOM intentions. The marketers, while recruiting digital celebrities, must ensure that the brand image of the brands aligns with the celebrities' image.

Furthermore, we advocate for marketers to establish long-term associations with celebrities, a strategy that can instill confidence and strategic planning. We also posit that social media provides a comfortable platform for individuals with low self-esteem, loneliness, and introversion to interact. Such interactions, as researchers suggest, can significantly boost the confidence levels of these individuals.

Limitation and Future Research

The study used the mall intercept method for collecting the data, which may reduce the generalizability. Future studies may use probability sampling to increase the generalizability. The study focused on one city, Karachi. Others may enhance their scope of work to other cities in Pakistan. Pakistan is a dualistic society, and other studies may extend our conceptual framework to individualistic societies. We have examined the impact of introverted persons on parasol relationships. We suggest others include introverts and extroverts in their conceptual framework. We have adopted the quantitative approach in this study. Besides several advantages, quantitative studies have several limitations. Therefore, we recommend that others use qualitative or mixed methodology.

Annexure 1

Constructs and Items Used in the Questionnaire

Loneliness

L1. In general, I feel like I lack companionship.

L2. I feel like I am often left out of social situations.

L3. In general, I feel isolated from others.

Self Esteem

SE1. I am worried about whether I am regarded as a success or a failure.

SE2. I feel self-conscious.

SE3. I feel displeased with myself.

SE4. I am worried about what other people think of me.

SE5. I feel inferior to others at this moment.

SE6. I feel concerned about the impression I am making.

SE7. I am worried about looking foolish

Par Social Relationship

PSR1. I feel close enough to use my favorite digital Apps.

PSR2. I feel comfortable with a digital celebrity's message on digital Apps.

PSR3. I can rely on the information I get from my favorite digital Apps.

PSR4. I am fascinated by my favorite digital celebrity apps.

PSR5. In the past, I pitied my favorite digital celebrities when they made a mistake on their digital Apps.

PSR6. My favorite digital celebrity Apps are helpful for my interests (in fashion and others).

Persuasion Knowledge

PK1. The digital celebrity tries to manipulate the audience in ways I do not like.

PK2. I was annoyed by the ad that the digital celebrity sent because it seemed to be trying to manage or control the consumer audience inappropriately.

PK3. When I read the ad the digital celebrity sent, I thought it was trying to persuade me to buy the products.

PK4. I noticed tricks in this ad that the digital celebrity sent to promote the product.

PK5. The ads that the digital celebrity sends are meant to sell the products.

Purchase Intention

PI1. I will buy the product that the digital celebrity sent through digital Apps.

PI2. I intend to buy the product that the digital celebrity sent through digital Apps.

PI3. I am interested in buying the product the digital celebrity sent through digital Apps.

PI4. I will likely buy products that the digital celebrity sends through digital Apps in the future.

eWOM

EW1. I will likely say positive things about the product that the digital celebrity sends to others through digital Apps,

EW2. I would recommend the product that the digital celebrity sends through digital Apps to my friends and relatives.

EW3. If my friends were looking for the product the digital celebrity sends through digital Apps, I would recommend it.

Introversion

IN1. I am quiet with others.

IN2. I prefer to be alone.

IN3. I am shy.

IN4. I am bashful.

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