Understanding Brands' Sustainability Communications in Social Media: How the Source of Communication Influences Consumers' Responses

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Abstract

With increasing environmental concerns and a shift towards sustainable consumption, brands are employing social media as a powerful platform to communicate their sustainability initiatives. This study investigates the effect of sustainability communication on Instagram on consumer perceptions with a specific focus on non-luxury hygiene products. Drawing from an extensive literature review, this research explores how consumer perceptions of brand efforts for environmental sustainability affect brand attitude, word-of-mouth (WOM), brand engagement, and purchase intentions. Additionally, it examines the moderating role of attitude towards influencers in influencing consumer responses. The findings reveal that sustainability communication via influencers on social media significantly impacts brand attitude, brand engagement, and purchase intentions. However, this influence is not uniform across all aspects. While influencer-generated content plays a crucial role in driving brand engagement and purchase intentions, it does not significantly affect brand attitude when compared to content generated by the brand itself. Furthermore, the study demonstrates that a positive attitude towards influencers amplifies the effect of influencers' sustainability messages on brand attitude, brand engagement, and purchase intentions. Nonetheless, it does not significantly influence e-WOM. The study's results underscore the intricate dynamics within sustainability communication on social media, emphasizing the importance of considering both the source of communication and the role of influencers. Brands aiming to navigate this landscape effectively should recognize the distinct roles of influencer-generated and brand-generated content and strategically leverage influencer marketing to foster positive brand attitudes, enhance engagement, and ultimately influence consumer behavior in favor of sustainability. These insights provide valuable guidance for brands seeking to align themselves with the growing demand for sustainability and engage with environmentally conscious consumers on social media platforms.

INTRODUCTION

In recent years, with the growing concerns about environmental issues; limited natural resources, climate changes, and global warming, environmental sustainability became a major concern for the consumers (Kuchinka, Balazs & Gavriletea, 2018). Increased awareness of environmental consciousness caused some consumers to change their attitudes and behaviors since they are concerned about environmental issues and only the satisfaction of basic needs is no longer enough (Mataracı & Kurtuluş, 2020). They believe that companies should also be aware of environmental issues and participate creating awareness of environmental sustainability (Kuchinka, Balazs & Gavriletea, 2018). Brands that are perceived as sustainable are more likely to attract and retain consumers, as well as enhance their attitude and brand image. Conversely, brands that are perceived as unsustainable may face negative publicity from consumers. Therefore, it is crucial for brands to understand and respond to the sustainability perceptions of their target audience in order to have a competitive advantage and maintain a positive brand image and most of the brands focus and invest on developing sustainable products to satisfy consumer demands for environmental sustainability (Kong, Witmaier & Ko, 2021).

Over the past few years, social media has become a powerful tool for brands to communicate their sustainability initiatives and engage with consumers on this issue. Brands have come to acknowledge the importance of social media platforms in terms of engaging with consumers, establishing and strengthening connections with them, and enabling them to make informed choices (Kim & Ko, 2010; Pentina, Guilloux, & Micu, 2018). Social media provides a platforms for brands to directly engage with their audience and showcase their sustainability initiatives. By communicating sustainability practices, brands can promote their commitment to environmental responsibility which will affect brand attitude, brand engagement, e-WOM & purchase intention.

Several social media communication strategies have been used by the brands to promote sustainable communication efforts to consumers. These strategies have been employed to improve the way consumers react to sustainable brands. Despite the increase in those practices, there is limited research done to understand the relationship between consumer perception of these brand efforts for environmental sustainability in social media and consumers' responses (Artemova et al., 2020). As a result,

understanding the impact of brands' sustainability social media communication on consumer behavior has become a critical area of research in the field of marketing.

In addition, previous studies that have aimed to comprehend brands' sustainability social media communications have relied on a limited amount of information and have focused on a specific culture such as German and South Korean (Kong, Witmaier & Ko, 2021).While the need for sustainability is highly recognized in these studies, the results suggest that sustainable communication has a stronger impact on non-luxury brands in a cultural environment.

Against this background, the objective of this research is to create and evaluate a model that seeks to comprehend brands' sustainability communications in social media and how the source of communication influences consumers' responses in terms of word-of-mouth (WOM), brand engagement and purchase. Based on the previous research on this topic, the objectives of this thesis can be outlined as follows;

     • To examine how does consumer perceptions of brand efforts for environmental sustainability affect brand attitude & consumers' responses.

     • To determine the impact of attitude towards influencer on consumers' responses.

     • To investigate how brand attitude influences consumers' responses.

     • Finally, the objective of this research is to assist brands and marketers in crafting successful marketing communication strategies that champion sustainable practices and establish them as proponents of sustainability, acknowledging the heightened awareness and expectations of contemporary consumers.

The study will analyze various forms of communication on Instagram, with a focus on non-luxury hygiene products. The choice to focus on this particular topic stems from several factors, including the influence of the pandemic, the sustainability practices advocated by the United Nations, and the overarching sustainability trend.

Firstly, the COVID-19 pandemic has significantly impacted consumer behavior and heightened the importance of hygiene products (Das et al., 2022). With increased emphasis on cleanliness and personal hygiene, there has been a surge in demand for products such as soaps, sanitizers, and other non-luxury hygiene products (Dsouza, 2020). Analyzing the communication strategies employed by brands in this specific

context can provide valuable insights into how these brands navigate the pandemic-driven market landscape and communicate their offerings effectively.

Secondly, the sustainability practices advocated by the United Nations are increasingly influential in shaping brand strategies. The UN's sustainable development goals encompass various aspects, including responsible production and consumption (United Nations, 2015). By focusing on non-luxury hygiene products, which are often used by a wide range of consumers, the study can explore how brands in this segment align with the UN's sustainability goals. This analysis can shed light on the extent to which these brands integrate sustainable practices into their communication efforts, contributing to the broader sustainability agenda.

Furthermore, sustainability has emerged as a prominent trend across industries (Deloitte, n.d.). Consumers are growing increasingly aware of the ecological and societal repercussions of the hygiene products they purchase. Analyzing the communication strategies of non-luxury hygiene product brands on Instagram can uncover how these brands incorporate sustainability messaging and practices into their communication efforts to align with this trend. However, despite all the reasons above there is no prior research has been conducted specifically examining the communication strategies employed by non-luxury hygiene product brands on Instagram. Therefore, this study aims to fill this research gap and provide valuable insights into the communication practices within this particular context.

Through this research, the goal is to offer a more comprehensive comprehension of the subject within the context of Turkey, thereby making a valuable contribution to the existing body of literature.

This study is organized as follows; firstly, a review of the literature on sustainability, brand communications on social media and consumers' responses will be presented. Secondly, the research model and hypotheses will be given followed by a presentation of the findings. Lastly, the study will conclude with a discussion and conclusion section, in which the outcomes and implications of further research will be explicated.

RESULTS

Demographic information was collected by asking questions about gender, age, educational status, marital status, and monthly income. The intention was to particularly target social media users. In order to gather data from this specific group, a convenience sampling method was employed. Convenience sampling involves selecting individuals who are readily available and easily accessible, making it a practical approach for targeting social media users. By utilizing this method, the survey aimed to capture the perspectives and characteristics of individuals who engage with social media platforms. Demographic information gathered from the survey is shown in Table 1.

In this study, 37.6% of the 149 participants were male and 62.4% were female. In addition, it is seen that the gender distribution of the 3 groups is not much different from the total. It is seen that 75.2% of the participants are single and 24.8% are married. When the groups are examined, it is seen that approximately 70% of each group consists of single people. It was found that more than half of the participants were between the ages of 25-34 (57.7%). It was also found that most of them (61.7%) had a bachelor's degree and more than half of them had a monthly income of more than 9001 TL (57.7% as shown in Table 1.

Reliability and factor analysis was done to to examine the various aspects of consumer responses, environmental sustainability and brand attitude. The outcomes of this analysis are presented in Table 3. The outcomes of the reliability assessment reveal that the Cronbach's Alpha values for brand attitude, brand engagement, WOM and purchase intention span from 0.78 to 0.95. This indicates that the utilized measurement scales were deemed satisfactory and dependable, as indicated in Table 2.

After conducting reliability analysis, the factor analysis technique was employed to assess the validity of the constructs. The dimensions were investigated by a factor analysis by using the principal component analysis, correlation matrix, anti-image matrix. In environmental sustainability construct, Question 5 is eliminated because of low factor loading (0,045<0,5). Environmental communication construct can be examined as two different parts; communication and consumer perception. Question 8 and 9 are about communication.

The outcomes of the factor analysis revealed Kaiser-Meyer-Olkin (KMO) sample validation coefficient values of 0.72 for brand attitude, 0.88 for brand engagement, 0.5 for word-of-mouth (WOM), 0.74 for purchase intention, and 0.84 for environmental sustainability. These values exceeded the threshold of 0.5 for both the overall test and each individual variable. Therefore, based on the KMO values, it can be concluded that the variables are statistically significant. These results demonstrate that the dataset of 149 participants was sufficient for uncovering the questionnaire's underlying factor structure. Furthermore, the outcomes of Bartlett's test, which assesses the meaningfulness of the factor structure, indicated that the obtained factor structures were meaningful, as presented in Table 3.

As can be seen in Table 4, the comparison of the participants in 3 different groups for WOM, brand engagement, purchase intention, and brand attitude scores were made with one-way ANOVA. The results show that the IF, BF and CG groups did not differ in terms of WOM, $p > .05$. On the other hand, participants significantly differ with their brand engagement, purchase intention and brand attitude scores, $F(2, 146) = 3.405, 5.078, 3.459$, $p < .05$, respectively. The Bonferroni post-hoc tests were performed to identify which group were different from the others. The results of the post-hoc test revealed that the IF group has significantly more engaged to the brand and have higher purchase intention compared to BF group and CG group. Also, the IF group has significantly more positive attitudes towards the brand compared to CG. Because of these results shown in Table 5.

In order to test the influence of consumer perceptions of brand communication efforts for environmental sustainability on a) brand attitude, b) e-WOM, c) brand engagement, and d) purchase intentions, t-test was applied. Two groups were identified in SPSS. The first group (Group 1) is the group that content was shown whether it is brand or influencer content, second group (Group 2) is the group that did not saw any content (Control Group). Among the examined constructs, it is seen that only the p-value of brand attitude is 0.008 < 0.05, indicating statistical significance as can be shown in Table 6. So, H1a is accepted. Conversely, the remaining constructs were not supported by the data, as their p-values exceeded the predetermined threshold; there is no meaningful connection between consumer perceptions of brand communication efforts for environmental sustainability on consumer responses.

Independent t-test analysis was done to investigate the differences between the effect of influencer related brand communication content and brand content on consumer responses. It was assumed in Hypothesis 3 that brand communications focusing on environmental sustainability made by influencers rather than brand itself will more strongly influence consumer responses. Therefore, 2 groups were determined for this test; Influencer group which includes the participants shown influencer content and brand group which only branded content was shown. The statistics of the group was given in Table 7 and the result of t-test was demonstrated in Table 8.

The p-value of brand attitude, obtained from the t-test is 0.11 which greater than 0.05, indicating that the results are not statistically significant As a result, H3a is rejected. On the other hand, p-value of brand engagement, WOM and purchase intention are 0.01, 0.03 and 0, respectively. Since all of them are less than 0.05, it is possible to say that brand communication focusing on environmental sustainability made by influencers have more stronger effect than branded contents. Therefore, H3b, H3c and H3d are accepted.

Another t-test was conducted to examine the relationship between attitude to influencer and brand attitude and consumer responses. It is assumed in Hyptohesis 4 that the more positive the attitude toward influencer, the higher is the influence of the influencers' environmental sustainability message on brand attitude & consumer responses. In order to proceed the test, respondents have been split into 2 groups based on the taking the mean value of attitude towards influencer into consideration with 21 respondents being higher than the mean value, shown in Table 9. As demonstrated in Table 10, p-value of brand attitude, WOM and purchase intention are 0.04, 0.01 and 0.01, respectively. However, p-value of brand engagement is 0.18 > 0.05. Therefore, H4a, H4c and H4d are accepted while H4b is rejected.

The attitude towards a brand's sustainability communication is positively influenced, regardless of whether it's done by the brand itself or an influencer. On the consumer responses side, there's a distinction between (WOM) and purchase intention, whether it's the brand or an influencer delivering the message.

To explore the fundamental processes that contribute to the influence of perceptions regarding sustainability on electronic word-of-mouth (eWOM) and the intention to make a purchase, we conducted a moderated mediation analysis using the PROCESS Model 4 by Hayes (Hayes, 2013). In this analysis, environmental sustainability was considered as the independent variable, consumer responses as the dependent variable, and brand attitude as the mediator in the study.

For the first analysis H2a was tested where independent variable is environmental sustainability, dependent variable is WOM and mediator is brand attitude. The result of moderated mediation analysis for H2a was shown in Table11. The results revealed a significant indirect effect of impact of environmental sustainability on WOM (b = 0.33) since there is no 0 in between lower and upper bound level, as shown in Table 11. Furthermore, the direct effect of environmental sustainability on WOM in presence of brand attitude mediator was not found to be significant (b = 0.36, p = 0.4 > 0.001). Hence, the relationship between environmental sustainability and WOM is not strong enough to be detected directly but it operates through the brand attitude. So, H2a was accepted.

Another moderating mediation analysis was conducted to examine the relationship between environmental sustainability and brand engagement. The indirect effect of environmental sustainability on brand engagement was found to be not significant (b = 0.13) since there is a 0 between lower and upper bound levels (Table 12), indicating there is no mediation. So, H2b is rejected.

Lastly, mediation analysis was done for environmental sustainability and purchase intention. As can be seen in Table 13, there is an indirect effect (b = 0.15) and direct effect (p = 0 < 0.001) which means there is a partial mediation. So, H2c is partially accepted.

DISCUSSION

The present study was conducted to understand brands' sustainability communications in social media to investigate how to source of communication influences consumers responses. Following an extensive examination of social media posts and partnerships between influencers and brands across diverse sectors, CIF was chosen to be examined for

this study. Given that this research was carried out during the pandemic, CIF was highly relevant and relatable brand for this study. The research employed a structured online survey using Likert-type scales to collect data from 149 participants in Turkey. Three different groups were created: the Control Group (CG), the Brand Group (BF), and the Influencer Group (IF), IF and BF were exposed to different types of CIF's content related to environmental sustainability. The collected data was analyzed using IBM SPSS 25 by using factor & reliability analysis, t-test and moderated mediation analysis.

The findings of this study shed light on the complex relationship between consumer perceptions of brand communication efforts for environmental sustainability and their subsequent effects on various aspects of consumer responses. The acceptance of Hypothesis 1a underscores the significant impact of these perceptions on brand attitude. Consumers who view a brand's communication efforts positively regarding environmental sustainability are more likely to develop favorable attitudes toward the brand. This aligns with the existing literature highlighting the influential role of sustainability in shaping consumer perceptions and preferences (Lee, Park & Han, 2019). Brands that effectively convey their commitment to environmental sustainability are poised to garner more positive responses and engagement from their audience, thus solidifying the link between sustainability-focused messaging and favorable brand attitudes.

Conversely, the rejection of Hypothesis 1b, along with Hypotheses 2c and 2d, reveals some nuanced findings. Despite positive perceptions of environmental sustainability communication efforts not directly translating into elevated e-WOM, brand engagement, or purchase intentions, this outcome might be attributed to several factors. For instance, while consumers appreciate sustainability efforts, they might not necessarily translate this appreciation into active discussions or intentions to purchase. The lack of a direct effect does not negate the importance of sustainability communication; instead, it emphasizes the multifaceted nature of consumer responses and the role of additional moderating variables. The rejection of Hypothesis 1b, which posited that positive perceptions of environmental sustainability communication efforts would directly lead to elevated e-WOM, brand engagement, or purchase intentions, aligns with findings from previous research (Lee, Park & Han, 2019). While consumers do appreciate sustainability efforts, this appreciation doesn't always translate into active discussions or immediate intentions to purchase. This

result underscores the multifaceted nature of consumer responses, reflecting the complex interplay of various factors in shaping attitudes and behaviors towards sustainability (Chen & Chang, 2021).

Moreover, the rejection of Hypotheses 2c and 2d, which suggested that positive sustainability perceptions would directly lead to increased e-WOM and brand engagement, underscores the necessity of considering additional moderating variables in the relationship between sustainability perception and consumer actions. It's consistent with the idea that consumers may not automatically engage with a brand on social media or spread positive e-WOM solely based on their perception of sustainability. These findings highlight the importance of a holistic view of consumer responses, recognizing that multiple factors may influence e-WOM and engagement, beyond sustainability perception alone (Furlow et al., 2020).

In contrast, the literature supports the idea that consumers who view brands as environmentally and socially responsible are more inclined to engage in positive e-WOM, brand engagement, and purchase intentions. Positive e-WOM can significantly impact a brand's reputation and sales, ultimately providing a competitive advantage (Chen & Chang, 2021). This aligns with the broader understanding of the influence of sustainability perception on consumer responses, where responsible brands tend to attract environmentally conscious consumers who are more likely to make purchases from and engage with such brands (Chang & Fong, 2010; Lee, Park & Han, 2019). Additionally, the rejection of Hypotheses 2c and 2d may highlight the role of contextual factors or brand-specific attributes that could influence e-WOM and brand engagement. The literature suggests that brands actively engaging with consumers on social media regarding sustainability concerns can build stronger relationships, foster positive brand associations, and mitigate the impact of negative e-WOM (Furlow et al., 2020). Conversely, negative perceptions of a brand's sustainability practices can lead to decreased brand engagement on social media, underlining the pivotal role of brand image and reputation in shaping consumer behavior (Furlow et al., 2020).

Furthermore, the literature consistently underscores the significance of sustainability perception in influencing purchase intentions, with environmentally conscious consumers

more likely to choose eco-friendly products and services, as well as make purchases from brands perceived as responsible (Chen & Chang, 2021; Lee, Park & Han, 2019). The rejection of these hypotheses in this study highlights the multifaceted nature of sustainability perception and its impact on consumer responses, emphasizing the need for a comprehensive understanding that takes into account various moderating factors and the complex interplay of perceptions, attitudes, and actions in the realm of sustainability communication and brand engagement. Possible factors contributing to the lack of direct effects could include individual differences in motivation, external influences, and contextual factors. It's crucial to consider that consumer responses are influenced by a myriad of internal and external forces beyond sustainability communication alone. In this context, exploring potential mediators or moderators that could enhance the link between environmental sustainability communication and e-WOM, brand engagement, and purchase intentions might offer valuable insights for future research. Practically, these findings suggest that marketers seeking to harness the power of sustainability communication to encourage e-WOM should prioritize fostering positive brand attitudes. For brand engagement and purchase intentions, a more holistic strategy considering additional factors beyond brand attitude is crucial.

The exploration of the mediation effect of brand attitude on the relationship between sustainability perception and consumer responses (e-WOM, brand engagement, and purchase intentions) has provided valuable insights into the intricate interplay of these variables. The acceptance of Hypothesis 2a, which posits that brand attitude mediates the positive effect of sustainability perception on e-WOM, aligns with previous research emphasizing the significance of brand attitude in shaping electronic word-of-mouth behaviors. Studies have consistently shown that consumers with positive brand attitudes are more likely to engage in positive e-WOM (Akar & Topçu, 2021; Cho & Park, 2011). This finding underscores the mediating role of brand attitude, where consumers who perceive a brand as environmentally and socially responsible are inclined to share their positive experiences with others on social media platforms. Thus, the accepted hypothesis reinforces the importance of fostering positive brand attitudes in the context of sustainability communication.

On the other hand, the rejection of Hypothesis 2b, which proposed that brand attitude mediates the positive effect of sustainability perception on brand engagement, offers intriguing insights. While a positive brand attitude is typically associated with increased brand engagement on social media (Lee & Kim, 2019; Kim & Ko, 2012), this outcome suggests that sustainability perception alone may not directly translate into heightened brand engagement. This finding underscores the complexity of brand engagement, which may be influenced by various other factors beyond sustainability perception. It's essential for brands to recognize that while sustainability is vital, it may not be the sole driver of active brand engagement on social media.

The partial acceptance of Hypothesis 2c, indicating that brand attitude partially mediates the positive effect of sustainability perception on purchase intentions, highlights an interesting interplay between these variables. Prior research has consistently demonstrated the positive role of brand attitude in influencing purchase intentions on social media platforms (Park & Lee, 2009; Huang & Chen, 2017). However, the partial mediation suggests that sustainability perception may also have a direct impact on purchase intentions, beyond its influence through brand attitude. This result underscores the multifaceted nature of consumer decision-making, where both sustainability perception and brand attitude play significant roles in shaping purchase intentions. These findings align with the existing literature on the importance of brand attitude as a mediator between sustainability perception and various consumer responses. These results underline the intricate web of influences governing consumer responses. The divergent outcomes across e-WOM, brand engagement, and purchase intentions highlight the distinct nature of these responses and the diverse array of factors that impact them.

The investigation into the impact of brand communications on environmental sustainability, delivered by influencers versus the company itself, has yielded significant insights into the dynamics of consumer responses across various dimensions. The rejection of Hypothesis 3a, which posited that brand communications focusing on environmental sustainability, when crafted by influencers rather than the company itself, would strongly influence brand attitudes, runs counter to some of the existing literature. Previous studies have indicated that influencer-created content can indeed have a substantial impact on brand attitudes due to its perceived authenticity, relatability, and personal touch (Bartsch

et al., 2019). However, it's important to acknowledge that the effectiveness of influencer-created content may vary depending on the specific context and audience. Some consumers may still prioritize the official company's stance on sustainability over influencer endorsements. This finding underscores the complexity of consumer perceptions and attitudes toward sustainability, suggesting that both influencer and company-created content can play roles in shaping brand attitudes.

On the other hand, the acceptance of Hypotheses 3b, 3c, and 3d, indicating that influencer-created content on environmental sustainability has a stronger influence on eWOM, brand engagement, and purchase intention compared to company-created content, aligns with prior research. Influencers have consistently been found to be effective in generating authentic and relatable content that resonates with their followers (Bartsch et al., 2021). This authenticity and relatability translate into increased engagement, positive eWOM, and higher purchase intentions. The acceptance of these hypotheses reinforces the idea that influencers can serve as powerful advocates for sustainability initiatives. Their ability to connect with audiences on a personal level and convey the importance of environmental sustainability can result in tangible benefits for brands, such as greater brand engagement, word-of-mouth promotion, and increased likelihood of consumers making sustainable choices.

These outcomes resonate with the growing influence of influencers in shaping consumer behavior and preferences. The endorsement of sustainability initiatives by influencers aligns with their established credibility and authenticity, allowing them to effectively bridge the gap between brand communications and consumer perceptions. Consumers might find influencer-led messages more relatable and compelling, leading to higher engagement and increased intentions to support such initiatives. So, we can say that utilizing influencers has an impact on engagement, WOM, and purchase intention. If we're focusing on sustainability communication, for WOM, purchase intention, and engagement, we should communicate through influencers. Having a positive attitude from influencers in terms of WOM and purchase intention also positively affects the brand.

Lastly, the analysis of how the attitude toward influencers influences the link between environmental sustainability perception and consumer responses has provided valuable insights, revealing the intricate dynamics at play in this association. The acceptance of Hypotheses 4a, 4c, and 4d, indicating that the attitude toward influencers positively moderates the influence of influencers' environmental sustainability messages on brand attitudes, brand engagement, and purchase intentions, is consistent with prior research. Studies have consistently highlighted the pivotal role of influencers in shaping consumer attitudes and behaviors, especially when the attitude toward influencers is positive (Chen, Lin & Chang, 2020; Han, Nunes & Dreze, 2019; Abdullah et al., 2020). The acceptance of H4a suggests that a positive attitude toward influencers amplifies the impact of influencers' environmental sustainability messages on brand attitudes. This finding aligns with the broader literature indicating that a favorable attitude toward influencers can significantly influence consumers' brand attitudes in a positive way (Jean et al., 2019). When consumers perceive influencers as credible and trustworthy, their endorsements of environmental sustainability can enhance brand attitudes, contributing to a more positive perception of the brand (Sung & Lee, 2018).

The validation of H4c emphasizes the importance of a favorable view of influencers in enhancing the impact of influencers' sustainability messages on brand engagement. Consumers who hold a favorable attitude toward influencers are more likely to actively engage with the brand's content on social media (Han, Nunes & Dreze, 2019). This aligns with the idea that influencers' authenticity and relatability, coupled with a positive influencer attitude, can motivate consumers to interact with the brand and share their experiences (Lee & Watkins, 2016).

The acceptance of H4d indicates that a positive attitude toward influencers enhances the impact of influencers' environmental sustainability messages on purchase intentions. This finding is in line with previous research suggesting that consumers who have a favorable attitude toward influencers are more prone to trust and be influenced by their recommendations, leading to increased purchase intentions (Brown & Hayes, 2008). It highlights the significance of influencer credibility and the positive influencer attitude in shaping consumers' intentions to make sustainable choices.

On the other hand, the rejection of Hypothesis 4b, which proposed that attitude toward influencers positively moderates the effect of influencers' environmental sustainability messages on e-WOM, suggests that the influence of influencers on e-WOM may not be significantly amplified by a positive influencer attitude in the context of environmental sustainability. This result deviates from the general understanding that a favorable influencer attitude can lead to positive e-WOM (Chen, Lin & Chang, 2020; Lee & Watkins, 2016). However, it's important to consider that e-WOM may be influenced by various factors beyond the attitude toward influencers, and sustainability-related discussions may require a distinct set of considerations. Overall, these findings emphasize the importance of cultivating positive influencer relationships to effectively leverage influencers in sustainability communication strategies and drive positive consumer responses.

CONCLUSION

In conclusion, the present study embarked on a comprehensive exploration of the intricate relationship between brand sustainability communication on social media, consumer perceptions, and responses. Through a meticulous examination of various facets, this research yielded several key findings and shed light on the complex dynamics within this domain.

The study's results highlighted the undeniable influence of consumers' perceptions of a brand's environmental sustainability efforts on their attitudes towards that brand. A positive perception of sustainability communication had a clear and significant impact on brand attitude, reaffirming the pivotal role of sustainability in shaping consumer preferences and perceptions. However, it's important to note that while consumers may appreciate sustainability efforts, this appreciation doesn't always translate into immediate word-of-mouth, brand engagement, or purchase intentions. The multifaceted nature of consumer responses was evident, underscoring the complex interplay of various factors in shaping attitudes and behaviors towards sustainability.

The mediation effect of brand attitude in the relationship between sustainability perception and consumer responses was explored, and it proved crucial in understanding how sustainability perception influences electronic word-of-mouth (e-WOM), brand

engagement, and purchase intentions. A positive brand attitude mediated the positive effect of sustainability perception on e-WOM, emphasizing the importance of fostering favorable brand attitudes. In examining the impact of influencer-created content versus brand-created content on environmental sustainability, it was revealed that influencer-generated content held a more significant sway over e-WOM, brand engagement, and purchase intentions. Influencers proved to be influential advocates for sustainability initiatives, bridging the gap between brand communication and consumer perceptions.Furthermore, the study unraveled the moderating role of the attitude toward influencers in shaping the link between sustainability perception and consumer responses. A positive influencer attitude amplified the impact of influencers' sustainability messages on brand attitude, brand engagement, and purchase intentions, reinforcing the importance of influencer credibility and trustworthiness. In summary, this research demonstrates that sustainability communication on social media is a multifaceted landscape, with consumer responses influenced by a myriad of factors. Brands seeking to effectively navigate this terrain should recognize the distinct roles of influencer-generated and brand-generated content and strategically leverage influencer marketing to foster positive brand attitudes, enhance engagement, and ultimately influence consumer behavior in favor of sustainability. These insights are invaluable for brands looking to align themselves with the growing demand for sustainability and engage with environmentally conscious consumers on social media platforms. As sustainability continues to be a prominent consideration in consumer choices, understanding the intricate dynamics of sustainability communication is crucial for brand success in the modern era.

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Tables

Table 1. *Distribution of the Participants' Demographic Information (n = 149)*

	Influencer		Brand		Control		Total	
Variables	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Gender								
Female	39	63.9	28	57.1	26	66.7	93	62.4
Male	22	36.1	21	42.9	13	33.3	56	37.6
Marital status								
Married	18	29.5	11	22.4	8	20.5	37	24.8
Single	43	70.5	38	77.6	31	79.5	112	75.2
Age								
18-24	11	18.0	9	18.4	7	17.9	27	18.1
25-34	31	50.8	30	61.2	25	64.1	86	57.7
35-44	12	19.7	8	16.3	5	12.8	25	16.8
45-54	5	8.2	2	4.1	0	.0	7	4.7
55+	2	3.3	0	.0	2	5.1	4	2.7
Education level								
High School	2	3.3	3	6.1	1	2.6	6	4.0
Associate degree	6	9.8	2	4.1	1	2.6	9	6.0
Bachelor's degree	40	65.6	27	55.1	25	64.1	92	61.7
Master's/doctoral degree	13	21.3	17	34.7	12	30.8	42	28.2
Monthly income								
4250 TL and below	4	6.6	7	14.3	6	15.4	17	11.4
4251 – 5000 TL	3	4.9	2	4.1	4	10.3	9	6.0
5001- 7000 TL	11	18.0	7	14.3	2	5.1	20	13.4
7001 - 9000 TL	6	9.8	5	10.2	6	15.4	17	11.4
9001 TL and above	37	60.7	28	57.1	21	53.8	86	57.7
TOTAL	61	100.0	49	100.0	39	100.0	149	100.0

Table 2. *Reliability Statistics and Factor Analysis Results*

Factor	Questions	Mean	Std Deviation	Factor Loadings	Variance Explained %	Cronbach's Alpha
Brand Attitude	To me CIF is… (Bad-….-Good)	4,05	0,94	,874	74%	0,83

	To me CIF is... (Not value for money- ….- Value for money)	4,03	0,89	,859		
	To me CIF is... (Low quality-….-High quality)	4,11	0,84	,857		
Brand Engagament	I would press/click "like" on posts related to the brand.	1,99	1,17	,896	77%	0,95
	I would follow the depicted brand on the Instagram page.	1,58	1,01	,895		
	I would comment on posts/pictures/graphics/videos related to the brand in the post	1,54	1,01	,894		
	I would share content related to the brand on the post.	1,64	1,04	,878		
	I would write reviews related to the brand on the post	1,82	1,08	,875		
	I would read posts related to the brand in the Instagram post.	1,96	1,09	,865		
	I would look at pictures/ graphics related to the brand in the post.	2,13	1,18	,847		
WOM	It is prideful for me to say that I am a customer of this brand	2,6	1,29	,907	82%	0,78
	I talk to many people about this brand.	2,25	1,25	,907		
Purchase Intention	Interacting with this brand's Instagram help me make decisions better before purchasing their products and services	2,37	1,24	,916	70%	0,86

	Interacting with this brand's Instagram increase my interest in buying their products and services	2,55	1,32	,867	
	I will definitely buy products as marketed on this brand's Instagram	2,43	1,24	,866	
	I have a high intention to become this brand customers	3,23	1,32	,706	
Environmental Sustainability	When purchasing products, I always select the ones with environmental certification, even though they are more expensive	3,41	1,18	,852	46%	0,87
	When two products are similar, I tend to select the one that harms the environment less, even though it is more expensive	3,87	1,11	,843	
	If the products sold by the firms seriously damage the environment, I will refuse to purchase them	3,8	1,05	,806	
	"I am often concerned about and absorb environmental knowledge and information"	3,74	1,02	,784	
	I feel frustrated and angry when I think of companies that conduct business by polluting the environment	4,25	1,03	,720	

	I follow the key points of recycling and classify recycled waste at home	3,48	1,21	,677	
	Sustainable brands spend more money on advertising campaigns compared to other brands.	3,3	1,15	,467	
	Sustainable brands are intensively advertised.	3,07	1,34	,611	

Table 3. KMO and Bartlett's Test results

Construct	KMO and Bartlett's Test
Brand Attitude	0,72
Brand Engagement	0,88
WOM	0,5
Purchase Intention	0,74
Environmental Sustainability	0,84

Table 4. Group Comparisons for Brand Communication

	Groups	n	Mean	SD	F	p
WOM	IF	61	2.68	1.19		
	BF	49	2.26	1.15	2.346	.099
	CG	39	2.28	1.07		
Brand engagement	IF	61	2.05	1.07		
	BF	49	1.63	.83	3.405	.036*
	CG	39	1.67	.86		
Purchase intention	IF	61	2.99	.99		
	BF	49	2.43	1.06	5.078	.007*
	CG	39	2.46	1.09		
Brand attitude	IF	61	4.25	.72	3.459	.034*

BF	49	4.06	.79
CG	39	3.85	.76

* *p* < .05

Table 5. Groups statistics for Group 1 & 2

GROUPS		N	Mean	Std. Deviation	Std. Error Mean
Brand Attitude	1.00	106	4,18	,75	,07
	2.00	43	3,82	,73	,11
Brand Engagement	1.00	106	1,88	,99	,09
	2.00	43	1,64	,83	,12
WOM	1.00	106	2,51	1,18	,11
	2.00	43	2,23	1,07	,16
Purchase Intention	1.00	106	2,75	1,06	,10
	2.00	43	2,44	1,05	,16

Table 6. t-test results for H1

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Brand Attitude	Equal variances assumed	,56	,45	2,70	,008	,36	,13
	Equal variances not assumed			2,74	,008	,36	,13
Brand Engagement	Equal variances assumed	,87	,35	1,40	,163	,24	,17
	Equal variances not assumed			1,51	,134	,24	,15

		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference
WOM	Equal variances assumed	,41	,52	1,37	,172	,28	,20
	Equal variances not assumed			1,42	,157	,28	,20
Purchase Intention	Equal variances assumed	,05	,82	1,59	,112	,30	,19
	Equal variances not assumed			1,60	,112	,30	,19

Table 7. Group statistics for Influencer & Brand Groups

Groups		N	Mean	Std. Deviation	Std. Error Mean
Brand Attitude	Influencer	57	4,29	,72	,09
	Brand	49	4,06	,78	,11
Brand Engagement	Influencer	57	2,10	1,08	,14
	Brand	49	1,62	,82	,11
WOM	Influencer	57	2,74	1,17	,15
	Brand	49	2,25	1,14	,16
Purchase Intention	Influencer	57	3,03	1,00	,13
	Brand	49	2,42	1,05	,15

Table 8. t-test results for H3

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Brand Attitude	Equal variances assumed	,86	,35	1,62	0,11	0,24	0,15
	Equal variances not assumed			1,60	0,11	0,24	0,15

Brand Engagement	Equal variances assumed	2,31	,13	2,51	0,01	0,48	0,19
	Equal variances not assumed			2,56	0,01	0,48	0,19
WOM	Equal variances assumed	,01	,93	2,17	0,03	0,49	0,23
	Equal variances not assumed			2,17	0,03	0,49	0,23
Purchase Intention	Equal variances assumed	1,03	,31	3,03	0,00	0,61	0,20
	Equal variances not assumed			3,02	0,00	0,61	0,20

Table 9. Group statistics for Group 1 & Group 2

GROUP Influencer		N	Mean	Std. Deviation	Std. Error Mean
Brand Attitude	1.00	36	4,16	0,75	0,13
	2.00	21	4,54	0,60	0,13
Brand Engagement	1.00	36	1,94	0,90	0,15
	2.00	21	2,38	1,31	0,29
WOM	1.00	36	2,44	1,05	0,18
	2.00	21	3,26	1,22	0,27
Purchase Intention	1.00	36	2,79	1,00	0,17
	2.00	21	3,45	0,88	0,19

Table 10. t-test results for H4

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Brand Attitude	Equal variances assumed	,50	,47	-1,98	,05	-,38	,19
	Equal variances not assumed			-2,10	,04	-,38	,18
Brand Engagement	Equal variances assumed	3,19	,07	-1,50	,13	-,44	,29
	Equal variances not assumed			-1,36	,18	-,44	,32
WOM	Equal variances assumed	,30	,58	-2,66	,01	-,81	,30
	Equal variances not assumed			-2,56	,01	-,81	,31

Purchase Intention	Equal variances assumed	,31	,57	-2,51	,01	-,66	,26
	Equal variances not assumed			-2,59	,01	-,66	,25

Table 11. Moderated mediation analysis for H2a

Total effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c_cs
0,69	0,18	3,82	0	0,33	1,05	0,45
Direct effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c'_cs
0,36	0,17	2,01	0,4	0	0,71	0,23
Indirect effect of X on Y						
		Effect	BootSE	BootLLCI	BootULCI	
	BA	0,33	0,1	0,16	0,56	
Completely standardized indirect effect(s) of X on Y						
		Effect	BootSE	BootLLCI	BootULCI	
	BA	0,22	0,06	0,1	0,35	

Table 12. Moderated mediation analysis for H2b

Total effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c_cs
0,41	0,17	2,34	0,02	0,06	0,77	0,3
Direct effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c'_cs
0,28	0,19	1,42	0,15	-0,11	0,68	0,2
Indirect effect of X on Y						
		Effect	BootSE	BootLLCI	BootULCI	
	BA	0,13	0,07	-0,01	0,29	
Completely standardized indirect effect(s) of X on Y						
		Effect	BootSE	BootLLCI	BootULCI	
	BA	0,97	0,05	-0,01	0,19	

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Table 13. Moderated mediation analysis for H2c

Total effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c_cs
0,64	0,15	4,26	0	0,33	0,94	0,49
Direct effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c'_cs
0,48	0,16	2,96	0	0,15	0,81	0,37
Indirect effect of X on Y						
	Effect	BootSE	BootLLCI	BootULCI		
BA	0,15	0,84	0	0,33		
Completely standardized indirect effect(s) of X on Y						
	Effect	BootSE	BootLLCI	BootULCI		
BA	0,12	0,05	0	0,23		