VIRTUAL VITALITY: UNVEILING THE ATTITUDES OF MALAYSIAN CONSUMERS TOWARDS ONLINE DIETARY SUPPLEMENT PURCHASES

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Abstract

The Covid-19 pandemic has significantly changed consumer behavior, with increasing reliance on online platforms for various needs, including the purchase of dietary supplements. This study examines the relationship between Malaysians' attitudes towards online purchase of dietary supplements, perceived usefulness, perceived ease of use, impulse buying and social media marketing. A purposive sample of one hundred Malaysian participants aged 20 to 45 years who currently purchase dietary supplements online and use them daily completed an online survey. The data was analyzed using Pearson product-moment correlation. Results show that perceived usefulness (r = .34, p <.001), perceived ease of use (r = .50, p <.001), and social media marketing (r = .24, p <.010) are positively correlated with consumers' attitudes towards buying supplements online. These results suggest that the more social media marketing was used to promote supplements, the higher the perceived usefulness and ease of use of the online platforms, and the more positive consumers were towards purchasing supplements online. This sheds light on the evolving dynamics of online dietary supplement purchasing behavior among Malaysian consumers during Covid-19. These findings are valuable for companies and marketers looking to improve their strategies and effectively target the Malaysian market in line with government regulations and guidelines.

Keywords: Consumer psychology, Perceived usefulness, Perceived ease of use, Impulse buying, social media marketing, attitudes.

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Abstrak

Pandemik Covid-19 telah mengubah tingkah laku pengguna dengan ketara, dengan bertambahnya kebergantungan terhadap platform atas talian untuk memenuhi pelbagai keperluan termasuk pembelian makanan tambahan. Kajian ini bertujuan untuk mengetahui hubungan antara sikap pengguna di Malaysia terhadap pembelian makanan tambahan secara atas talian, persepsi sama ada urusniaga tersebut dirasakan bermanfaat serta mudah untuk digunakan, pembelian impulsif, dan pemasaran secara atas talian. Seramai 100 orang pengguna dewasa yang berumur antara 20 hingga 45 tahun yang mengambil makanan tambahan telah mengambil bahagian dalam kajian ini. Korelasi Pearson digunakan untuk menentukan hubungan antara pembolehubah. Dapatan kajian menunjukkan terdapat hubungan yang signifikan yang positif antara urusniaga yang dirasakan bermanfaat ($r = .34$, $p < .001$), urusniaga yang dirasakan mudah untuk digunakan ($r = .50$, $p < .001$), dan pemasaran melalui media sosial ($r = .24$, $p < .010$) dengan sikap pengguna terhadap pembelian makanan tambahan secara atas talian. Keputusan kajian ini menunjukkan bahawa sekiranya pengguna berasakan bahawa urusniaga di atas talian adalah bermanfaat dan mudah untuk digunakan serta pemasaran melalui media sosial digunakan dengan meluas, mereka akan bersikap lebih positif terhadap pembelian makanan tambahan secara atas talian. Ini menunjukkan dinamik pengguna di Malaysia yang berkembang seiring dengan perubahan yang berlaku Ketika pandemik Covid-19. Keputusan kajian ini adalah sangat penting untuk syarikat dan pemasar dalam memahami tingkah laku pengguna bagi mengukuhkan lagi strategi pemasaran yang lebih efisien dan bermanfaat, sejajar dengan peraturan dan garis panduan yang ditetapkan oleh kerajaan ke atas makanan tambahan. .

Kata kunci: *Psikologi konsumer, Urusniaga yang dirasakan bermanfaat; Urusniaga yang dirasakan mudah untuk digunakan, Pembelian impulsif; Pemasaran melalui media sosial, Sikap*

Introduction

The global landscape has been significantly disrupted by the Covid-19 pandemic, impacting daily operations and recalibrating established norms in various sectors, both in a national and international context. The compulsion to stay at home has encouraged a noticeable shift towards virtual working arrangements as an alternative to traditional face-to-face interactions. One consequence of this paradigm shift can be seen in the online retail sector, where the virtual realm has become a central medium for sourcing various goods, from groceries to essentials such as dietary supplements. This emerging trend, characterized by a shift away from traditional purchasing behavior, is a response to the need to avoid densely populated physical spaces due to the ongoing threat of Covid-19. Therefore, this inclination to shop online is underpinned by a desire to minimize health risks. Empirical research has found that

73% of the Malaysian population admit that the pandemic has boosted confidence in virtual transactions, leading to an increase in the use of online platforms to purchase goods and services (Jaafar, 2020). This surge underscores the reconfiguration of consumer attitudes and preferences triggered by the demands of the pandemic.

In addition to the prevailing trends, there has been a notable rise in the purchase of dietary supplements, coinciding with the increasing prevalence of online purchases amid the pandemic. The Malaysian dietary supplements market recorded an estimated compound annual growth rate (CAGR) of 3.0% between 2018 and 2020. It will reach RM2.1 to 2.2 billion (USD519 to 544 billion) in 2020, indicating a growing trend (Weerasena, Ferlito, & Bellavite, 2021). This trend can be attributed to the prevailing belief of many individuals that these supplements offer protection against the outbreak of Covid-19 (Lordan et al., 2021). This trend is confirmed by the findings of Aysin and Urhan (2021), who found an increase in the use of dietary supplements in various countries during the pandemic. A survey conducted in Malaysia in July 2020 on the use of dietary supplements found that respondents aged 16 to 44 were more likely to use dietary supplements since the advent of Covid-19 (Hirschmann, 2021). This shows that many individuals invest in, purchase, and take supplements because they believe in their potential effectiveness in alleviating Covid-19 symptoms. In addition, researchers have highlighted the importance of variables such as impulse buying (Themba et al., 2021), social media marketing (Manzoor et al., 2020), perceived usefulness (Nguyen et al., 2019), and perceived ease of use (Kariapper, 2020) in the context of online purchasing behavior. With this in mind, this study investigates the relationships between perceived usefulness, perceived ease of use, impulse buying, social media marketing, and attitudes towards online purchase of dietary supplements in the Malaysian context.

Literature

Review

The 2014 Malaysian Adult Nutrition Survey paints a vivid picture of the Malaysian dietary landscape, showing that about a third of the country's population consumes various dietary supplements as part of their daily diet (Mohd. Zaki et al., 2018). Favoring dietary supplements was a common practice even before the Covid-19 pandemic. However, the compelling report by Wong et al. (2021) highlights a remarkable change triggered by the emergence of the pandemic. In the wake of this global upheaval, interest in immune-boosting vitamins and supplements has increased significantly. This reflects the collective appeal of products that promise comprehensive protection against the specter of disease. This seismic shift underscores a marked escalation in the use of supplements in the Covid-19 era and points to an evolving health consciousness characterized by a new sense of urgency.

It is also interesting to note the synchronized rise in online purchases, which have experienced a meteoric rise parallel to the development of the pandemic. The impact of the pandemic on shopping habits is unmistakable, as evidenced by a survey conducted by Rakuten Insight Surveys Malaysia, where an overwhelming majority of respondents ventured into online shopping during the crisis. At the same time, only 6% dared to resist the lure of virtual commerce (Muller, 2021). This collective inclination towards online shopping is a remarkable shift highlighting the Malaysian population's preference for virtual shopping experiences over brick-and-mortar retail. The confluence of this digital revolution with the propensity for dietary supplementation provides a stimulating exploration of the intersection between consumer online attitudes and dietary supplement consumption.

In this whirlwind of change, the frequency of online purchases becomes emblematic of a complex web of individual purchasing habits, as shown in the insightful work of Shariff and Abd. Hamid (2021). This revelation emphasizes the urgency of a comprehensive study of the attitudes underlying the online purchase of supplements. However, caution must be exercised when taking supplements, as indiscriminate use of such supplements can have potentially adverse health consequences in specific individuals (Navarro et al., 2017). In addition, the complicated interplay between dietary supplements and concomitant medication must be carefully considered, as shown in Ooi's (2009) review of potential interactions. The unique dynamics of the Covid-19 era heighten the relevance of these concerns, given the abrupt increase in supplement use, which, although seemingly beneficial, could inadvertently cause harm in specific cohorts. The consideration by Lordan et al. (2021) that there is no evidence for the efficacy of dietary supplements compared to Covid-19 makes the scenario even more complex.

Consequently, the crux of the matter requires a nuanced analysis to identify the determinants of consumers' propensity to purchase supplements online in these unprecedented times. The Technology Acceptance Model (TAM) is at the forefront of this. It emphasizes two key aspects - perceived usefulness and perceived ease of use - which significantly impact individuals' attitudes toward technology. As attitudes have been highlighted as the best predictor of online purchasing behavior (Nguyen, 2019), this study focuses on the relationships between perceived usefulness and perceived ease of use with attitudes.

Interestingly, this study goes beyond the boundaries of perceived usefulness and perceived ease of use. It also incorporates impulse buying, which has long been recognized as an essential predictor of consumer attitudes (Fishbein & Ajzen, 1975), as Zhang (2006) notes, since 90% of all consumers have been shown to make impulse purchases (Cobb & Hoyer, 1986). In addition, social media has enabled consumers to actively interact online and share their opinions and experiences about products or services with individuals within the same network. This trend contributes

to the influence of social media marketing on consumer attitudes towards online purchasing (Madlberger & Kraemmer, 2019). There is, therefore, a need to investigate the complex interplay between impulse buying, social media marketing, perceived usefulness, and perceived ease of use. Such an investigation against online supplement purchasing is paramount in the turbulent landscape triggered by the Covid-19 pandemic.

Attitudes towards online purchasing

Previous research explains that attitude encompasses an individual's evaluative stance, emotional disposition, and preferences toward a particular concept or object (Akar, 2021; Akbar & James, 2014). Akar (2021) further explained that this evaluation can manifest as a positive or negative outcome and that individuals who are positively disposed towards an outcome are likelier to engage in the associated behavior. In this context, Akar (2021) highlights that a positive attitude toward online shopping leads consumers to engage in this behavior. The presence of positive emotions essentially prompts consumers to make online purchases. Thus, an attitude towards online purchasing emerges when individuals cultivate goals influencing their propensity to engage in online purchasing behavior. Delafrooz et al. (2009) summarize this idea by describing online purchasing attitudes as a spectrum of positive or negative emotions associated with online transactions.

The seismic impact of the Covid-19 outbreak has triggered a massive shift in consumer behavior, driving individuals from conventional face-to-face transactions to virtual avenues facilitated by online platforms and apps such as Facebook, Instagram, Shopee, and Lazada. This digital migration is based on the belief that virtual purchases are inherently safer than conventional physical interactions and fit the unprecedented circumstances triggered by the pandemic. Furthermore, the pandemic has triggered a paradigm shift in lifestyles and attitudes, as the profound effects of Covid-19, including quarantines, social distancing, and community lockdowns, have recalibrated people's perceptions of health and consumption (Gu et al., 2021). At the same time, the consumption of dietary supplements has increased sharply with the burgeoning trend of online purchasing. Mohsen et al. (2021) highlight that sales of dietary supplements have skyrocketed. A survey in the US found that purchases of vitamin and mineral-fortified products have increased during the pandemic. This increase is primarily due to the widespread belief that supplements could boost the immune system and help combat Covid-19 manifestations. This aligns with the findings of Aziz and Kamarulzaman (2020), who suggest that dietary supplements have gained traction among Malaysians due to their perceived potential to boost immunity.

Perceived usefulness

The construct of perceived usefulness has been systematically analyzed in previous research. It represents an individual's belief in the potential of a system to promote personal development and improve work performance (Leelayouthayotin, 2004; Cho & Sagynov, 2015; Sultan & Uddin, 2011; Nguyen et al., 2019). Reyes-Mercado et al. (2017) further argue that these beliefs strongly influence users' attitudes toward the system, influencing their behavioral intentions when using the system. In short, the belief that using the system can improve work performance and personal growth has a profound effect and shapes attitudes and behavioral intentions. Leelayouthayotin (2004) confirms the significant influence of perceived usefulness on technology adoption intentions in various empirical contexts and highlights its effect as a catalyst for behavioral commitment. Perceived usefulness proves to be a crucial precondition for the emergence of attitudes.

In online purchases, perceived usefulness expresses the belief that participating in digital transactions leads to better performance outcomes (Ofori & Appiah-Nimo, 2019). This concept can be extended even further: Perceived usefulness of the Internet means that customers believe in the ability of the Internet as a medium to improve their performance or productivity and thereby increase the effectiveness of their purchasing decisions (Cho & Sagynov, 2015). This paradigm states that perceived usefulness in online purchasing reflects an individual's belief that participating in e-commerce via the Internet enhances their performance and shapes their overall purchasing experience. There are also opposing views, as shown by Aisyah et al.'s (2021) conceptualization, where perceived usefulness takes on a subjective nature rooted in customers' perceptions of the efficiency of online platforms in facilitating their shopping activities. Essentially, this construct is a feeling that arises from the experiences that consumers have had in their interactions with online shopping centers. The prevailing literature, therefore, contains a multi-layered understanding of perceived usefulness that encompasses its role as an influencer of attitudes and behavioral tendencies within the online shopping landscape.

Therefore, this study examines the relationship between perceived usefulness and consumer attitudes toward online supplement purchases. It is hypothesized that:

H1: There is a significant positive relationship between perceived usefulness and attitudes of consumers in Malaysia towards online purchase of dietary supplements.

Perceived ease of use

The perceived ease of use domain encompasses individuals' beliefs about the simplicity of technologies, websites, systems, and internet operations (Cho & Sayynov, 2015; Moslehpour et al., 2018; Iriani & Andjarwati, 2020). Rizwan et al.

(2014) distill this concept by explaining how perceived ease of use is related to the minimal effort required to interact with a system, taking into account both cognitive and physical effort and the inherent simplicity of the process. Rizwan and colleagues (2014) further explain the construct by describing how much a task can be accomplished without effort. Essentially, perceived ease of use encompasses an individual's perception that technological entities, be they systems or websites, are endowed with user-friendly simplicity and require minimal cognitive and physical investment.

Transferring this construct to online purchasing, perceived ease of use refers to customers' belief that their interaction with e-commerce platforms is characterized by seamless simplicity (Cheema et al., 2013). Iriani and Andjarwati (2020) and Mondol and colleagues (2021) extend this perspective by describing perceived ease of use in online purchasing as users' expectations of the process and subsequent perceptions that ultimately lead them to their desired online purchase outcome. In short, the essence of perceived ease of use in online shopping is rooted in users' assessment of the convenience of the mechanism and their perception of the path to their desired online shopping outcome. This leads to users moving seamlessly through the internet to make online purchases.

In this nuanced landscape, this study examines the relationship between perceived ease of use and consumer attitudes toward online purchases of dietary supplements. Therefore, it is hypothesized that:

H2: There is a significant positive relationship between perceived ease of use and attitudes of consumers in Malaysia towards online purchase of dietary supplements.

Impulse buying

The phenomenon of impulse buying dates back to the 1940s, when scholars used the term to describe a consumer's quick and unplanned transactional decisions (Febrilia & Warokka, 2021). This characterization is also reflected in the explanation by Cheriyan and Tamilarasi (2020), who define impulse buying as unanticipated, unplanned purchases without prior consideration. This construct manifests as a behavior in which people feel a sudden, overwhelming urge to buy an item they did not intend to purchase. These instances often occur spontaneously and are driven by an impulsive desire, which encapsulates the impulse buyer's essence as someone driven to act by an irresistible urge (Cheriyan & Tamilarasi, 2020).

However, a more nuanced discourse challenges the notion that all unplanned purchases per se qualify as impulse purchases (Harahap et al., 2021). Researchers claim that this categorical classification oversimplifies the complexity of the dynamics of impulse buying. While all impulse purchases are indeed unplanned, the opposite is

not generally true, as not every unplanned purchase is characterized by impulse buying. Sometimes, it may be a mere oversight where they may have forgotten to exclude items from their shopping list.

During the dramatic global situation created by the Covid-19 pandemic, the propensity for impulse buying has changed significantly. Heightened anxiety, a hallmark of this time, has led people to make impulsive purchasing decisions, even extending to the purchase of consumer goods and dietary supplements. As Harahap et al. (2021) point out, people struggling with stress tend to buy things they do not necessarily need. The palpable stress caused by the pandemic is leading people to make impulse and unplanned purchases as a coping mechanism. This is particularly evident in dietary supplements, where the combination of health concerns and heightened emotions increases the temptation to impulse buy.

Against this changing landscape, this study examines the relationships between impulse buying and Malaysian consumers' attitudes towards online purchase of dietary supplements. In this context, it is hypothesized that:

H3: There is a significant positive relationship between impulse buying and Malaysian consumers' attitudes towards online purchase of dietary supplements.

Social media marketing

According to Manzoor et al. (2020), social media marketing uses social media platforms as a marketing tool. Furthermore, social media marketing is described as using social media networks to promote a company’s products and services (Al-Azzam & Al-Mizeed, 2021). In other words, social media marketing occurs when companies use social media platforms to sell their products to customers. A study by Cho and Son (2019) also states that social media has become an important marketing tool for businesses as more and more people use social media such as Facebook and Instagram regularly. This shows that social media can be seen as one of the most essential tools for entrepreneurs in marketing their goods and products. A study by Manzoor et al. (2020) and Artanti et al. (2019) also emphasized that social media is an excellent medium for selling products or services, as it plays a crucial role in online marketing success.

In particular, when the Covid-19 pandemic hit, there was a massive increase in interest in online purchasing, influencing consumer attitudes towards purchasing, especially for dietary supplements. A study by Aziz and Kamarulzaman (2020) found that the intense marketing of dietary supplements on social media has sparked consumer interest in the use of dietary supplements. Therefore, as Ali Taha et al. (2021) mentioned, many companies have incorporated social media platforms to promote their business and increase their profits by recommending their customers

share information with their friends. This shows that many people have been influenced by social media marketing toward online purchasing behavior, especially when buying dietary supplements.

Therefore, this study aims to test how social media marketing is related to consumers' attitudes toward buying supplements online during the Covid-19 pandemic. It is hypothesized that:

H4: There is a significant positive relationship between social media marketing and consumers' attitudes towards online purchases of dietary supplements in Malaysia.

Methodology

The present study used a cross-sectional design to investigate perceived usefulness, perceived ease of use, impulse buying, and social media marketing about attitudes toward online purchases of dietary supplements in Malaysia. A survey-based research approach was used to collect the quantitative data. This survey comprised online questionnaires designed to measure the variables under study.

This study comprised a cohort of one hundred participants, twenty-seven males and seventy-three females. The sample was drawn from a group of individuals currently taking dietary supplements. A purposive sampling method was used to select participants, specifically targeting those who actively purchase and use dietary supplements. The age range of participants ranged from 20 to 45 years. Notably, individuals who purchased dietary supplements exclusively from physical retail shops were excluded from this study.

Instrumentation

The survey included scales to measure attitudes toward online purchases, perceived usefulness, perceived ease of use, impulse buying, and social media marketing. The survey included questions on demographic information such as age and type of supplements currently taken and an information sheet with a consent form.

The Impulsive Buying Scale (Godelek & Akalin, 2018) was used to measure the tendency of study participants to make impulse buying. This scale consists of nine items (e.g., "I often buy things spontaneously" and "I often buy things without thinking"), with all items answered on a 5-point Likert scale, where 1 to 5 represents strongly disagree to agree strongly. A higher score on the scale indicates a higher level of impulse buying. This scale had good reliability, as shown by Cronbach's alpha = .80 in the present study.

The Social Media Marketing Activities (SMMA) scale (Yadav & Rahman, 2017) measured participants' perceptions of social media advertising for products. A total of six items were used for this study. All questions are answered on a 7-point Likert scale, with 1 to 7 representing "strongly disagree" and "strongly agree". A higher score on the scale means that the participants know more about social media marketing. This scale had a satisfactory reliability, as shown by Cronbach's alpha value of .70 in this study.

The Perceived Usefulness Scale (Van der Heijden et al. 2003) was used to measure the perceived usefulness of online purchasing among the participants. This scale consists of three items (e.g., "It is easy to shop online at this website" and "The online shopping process at this website is fast"), with all items answered on a 7-point Likert scale, where 1 to 7 represents strongly disagree to agree strongly. A higher score on the scale indicates that online shopping is perceived as more practical. This scale had a satisfactory reliability of .74 in the present study.

The Perceived Ease of Use Scale (Zarrad & Debabi, 2012) was used to measure the participants' perceived ease of use of online purchasing. This scale consists of six items (e.g., "I think that I would find it easy to learn how to shop online" and "I think that I could become skillful at online shopping"), with all items answered on a 5-point Likert scale, where 1 to 5 represents complete agreement to complete disagreement. A higher score on the scale indicates that online shopping is perceived as more accessible. This scale had a satisfactory reliability, as evidenced by Cronbach's alpha = .63 in this study.

The Attitudes Toward Online Purchasing Scale (Vazquez & Xu 2009) measured participants' attitudes toward online purchasing. This scale consists of four items (e.g., "I am interested in online shopping" and "My attitude towards online shopping is positive"), with all items answered on a 7-point Likert scale, where 1 to 7 represents " strongly disagree" to "strongly agree." A higher score on the scale means that consumer attitudes towards online shopping are higher. This scale had a satisfactory reliability, as shown by Cronbach's alpha = .69 in the present study.

Procedures

Participants were given access to the online survey via a Google form link distributed via popular social media platforms such as WhatsApp, Telegram, Instagram, and Twitter. Each participant had to complete a series of questionnaires containing demographic information and the variables being analyzed. Beforehand, participants were presented with an information sheet that explicitly addressed ethical considerations. This document included vital elements such as informed consent, the right to withdraw from the study at any time, anonymity assurances, and a confidentiality commitment. In addition, the information sheet included a brief

overview of the objectives and methodology of the study.

Strict ethical principles were followed throughout the study. Participants were free to either complete the questionnaire or withdraw from the study at any time without consequence. The researchers ensured that participants were adequately informed about the purpose and nature of the study before the survey began. Participants were also assured that their data would be confidential and not passed on to third parties. The questionnaire was carefully designed to exclude questions that could invade participants' private information, so their anonymity and confidentiality were maintained. Ethics approval for this study was obtained from the Ethics Committee of the Department of Psychology, International Islamic University Malaysia.

Results

The majority of participants were in their 20s (58%), followed by their 30s (29%), while the remaining respondents were between 41 and 45 years old (13%). Regarding gender, the sample consisted predominantly of women (73%), followed by men (27%). In terms of supplements that participants were currently taking, vitamins (50%) were mentioned most frequently, followed by gum arabic (10%) and zinc (10%). In contrast, a smaller proportion of participants reported taking ginkgo (4%), followed by garlic pills (8%) and evening primrose oil (9%).

Table 1: Participants' demographic profile

Variables	Frequency (*n*)	Percentage (%)
Gender		
Male	27	27
Female	73	73
Age		
21-25	33	33
26-30	25	25
31-35	13	13
36-40	16	16
41-45	13	13
Types of dietary supplement		
Vitamin	50	50
Fish oil	9	9
Gum Arabic	10	10
Garlic	8	8
Evening Primrose	9	9
Ginkgo	4	4
Zinc	10	10

A Pearson product-moment correlation analysis was systematically conducted to examine the relationships between perceived usefulness, perceived ease of use, impulse buying, social media marketing, and consumer attitudes toward online purchases of dietary supplements in the Malaysian context. The correlation results provided compelling findings and showed statistically significant positive correlations between perceived usefulness ($r = .34$, $p < .001$) and perceived ease of use ($r = .50$, $p < .001$) with consumers' attitudes towards online purchases of dietary supplements. In addition, social media marketing was found to be significantly correlated with attitudes towards online purchase of dietary supplements ($r = .24$, $p < .010$). Amidst these positive correlations, however, a notable counterpoint also emerged. Specifically, a statistically significant negative correlation was found between the tendency to impulse buy and consumer attitudes toward purchasing dietary supplements online ($r = -.24$, $p < .010$).

Table 2: Correlation among Variables Under Study

Variables	Perceived usefulness	Perceived ease of use	Social media marketing	Impulse buying	Attitudes
Perceived usefulness	-	.36**	.41**	-.25*	.34**
Perceived ease of use	-	-	.26**	-.21*	.50**
Social media marketing	-	-	-	-.30**	.24*
Impulse buying	-	-	-	-	-.24*
Attitudes	-	-	-	-	-

*Note: **p < .001, p < .010*

Discussion

This study investigated the relationships between Malaysian consumers' attitudes towards online purchase of dietary supplements, perceived usefulness, perceived ease of use, impulse buying, and social media marketing. This research took place against the backdrop of a dynamic, ever-evolving consumer landscape characterized by the unique challenges posed by the pandemic.

To decipher this multi-layered phenomenon, we embarked on a journey that pushed the boundaries of the Technology Acceptance Model (TAM). We integrated impulse buying and the influence of social media marketing into our model. The resulting findings revealed correlations that provide valuable insights into the relationships between these variables and consumer attitudes toward purchasing dietary supplements online. The analysis yielded compelling results. The core elements of the Technology Acceptance Model (TAM), including perceived usefulness and perceived ease of use and the extended variable of social media marketing, showed statistically significant positive correlations with attitudes toward buying supplements online. This confluence of factors emphasizes the central role of perceived usefulness and ease of use in online purchasing decisions, further reinforced by the relationship

with social media marketing strategies.

The results of this study revealed positive correlations that underpin the dynamics of online purchasing behavior of dietary supplements. First and foremost, statistically significant positive correlations were found between attitudes towards online purchase of dietary supplements and perceived usefulness, perceived ease of use, and social media marketing. This study found that consumers perceive the online purchase of dietary supplements as remarkably useful. This observation fits seamlessly with previous research showing a similar relationship between perceived usefulness and positive attitudes towards online purchases (Nooruddin, 2021; Iriani & Andjarwati, 2020; Zhang et al., 2006). It emphasizes the convenience and time savings associated with online shopping, which has proven particularly attractive in Covid-19.

Equally notable is that perceived ease of use positively correlates with consumer attitudes toward buying supplements online. This correlation is consistent with previous studies by Ramayah and Ignatius (2005), Zuelseptia et al. (2018), Kasuma et al. (2020), and Nooruddin (2021), all of which highlight the importance of perceived ease of use on consumer attitudes. This emphasizes that people who perceive online platforms as intuitive and user-friendly are more inclined to choose them over physical shops for their purchases.

Furthermore, the influence of social media marketing was particularly evident and is confirmed by a growing body of research. Indeed, our findings support the assertion that social media marketing is an excellent tool that correlates with consumer attitudes (Madlberger & Kraemmer, 2019; Apriliya, 2013; Manzoor et al., 2020; Artanti et al., 2019). This emphasizes the central role of social media platforms as fertile ground for successful online marketing efforts.

However, a surprising counterpoint emerges in this web of positive correlations. In contrast to the findings of Zhang et al. (2006) and Themba et al. (2021), our study found a statistically significant negative correlation between impulse purchases and attitudes toward buying supplements online. One possible explanation for this divergence is the nature of supplement purchasing, which is often a conscious and health-oriented decision rather than impulsive.

Conclusion

In the ever-changing landscape of consumer behavior, the Covid-19 pandemic has led to a global increase in the consumption of dietary supplements that transcend national boundaries (Aysin & Urhan, 2021). Malaysia has been no exception to this trend. As the consumption of dietary supplements continues to rise, it is crucial for companies looking to refine their marketing strategies and optimize targeted campaigns to understand the nuances that drive consumer attitudes toward

purchasing these products online.

It is important to recognize certain limitations of this study. Factors such as the low response rate, modest sample size, and geographical limitations resulting from the exclusive focus on Malaysian consumers of dietary supplements must be considered. In addition, the lack of demographic details, including state, ethnicity, income, and previous supplement use, provides an opportunity for future research to gain a more comprehensive understanding of these nuances.

It is worth looking at future research opportunities. Increasing the sample size is a logical step to increase the power of the study. Even though our current group of respondents fulfills the study's objectives, a larger sample would increase the robustness of our findings. In addition, future research can examine the causal relationships in more detail to uncover the complex mechanisms that determine consumer attitudes. This would shed even more light on the intricacies of online supplement purchasing.

In practical terms, our study has provided marketers with a new perspective and innovative strategies to drive supplement adoption, especially amid a global pandemic. In the ever-changing terrain of consumer behavior, our findings will be a compass for companies to create more effective and consumer-centric marketing, ultimately benefiting consumers and the dietary supplement industry.

This study sheds light on the intricate web of factors influencing consumer attitudes toward buying supplements online. The findings are rooted in the post-pandemic Malaysian landscape and offer insight into the ever-evolving world of consumer behavior, where we face unprecedented challenges and opportunities in the digital age.

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