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SEARCH Journal of Media and Communication Research (SEARCH)

ABOUT THE JOURNAL

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The aim of the *SEARCH Journal of Media and Communication Research* is to promote and enhance research development and debates in the field of media and communication research. It also serves as a forum for researchers and industry players who use research as the frame for social awareness and change. We welcome any submission of manuscripts throughout the year. Authors are invited to submit scholarly works on communication such as International Relations, Media Management, Film and Media Arts, Digital Education and Communities, Communication and Policies, Globalization and Social Impact, Youth and Media, Audience and Perception Analysis, Democracy and Integration, Media Literacy and Education, Media and Development, Health Communication, Politics, Hegemony and the Media, Gender and Sexuality, Social Media and Subcultures, Popular Culture and Society, Media and Religion, Media and Identity, War/Peace Journalism, Conflict and Crisis Communication, Strategic Communication and Information Management, Digital Media, Advertising and Persuasive Management, Public Relations and Crisis Management, Global Journalism and relevant areas from the standpoint of media and communication research.

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FOREWORD

It is with great pride and scholarly enthusiasm that I present this June special issue of *SEARCH Journal of Media and Communication Research*, featuring a curated selection of papers from the 5th International Conference on Communication, Language, Education and Social Sciences (CLESS 2024), held as part of the Digital Future Congress (DIFCON). Themed “*Nurturing Intelligence for Inclusive and Sustainable Societal Advancement*,” the conference provided a fertile ground for critical inquiry into the intersections of technology, culture, communication, and society.

The twelve papers in this issue capture the conference’s interdisciplinary ethos and intellectual richness. From exploring the impact of K-dramas on consumer behaviour to the role of strategic visual communication and eWOM in shaping purchase intentions, these studies offer fresh insights into how media and communication influence identity, trust, and decision-making. Several articles address contemporary social phenomena such as the psychological effects of parenting styles and sharenting, the feminist resonance of mainstream cinema like the *Barbie* movie, and the complex dynamics of phubbing driven by FOMO and narcissism.

Other contributions examine timely topics such as mobile tourism adoption among Gen Z, leadership and communication styles in agile environments, and the communicative strategies within online food delivery ecosystems. Taken together, these papers not only advance theoretical frameworks but also provide applied perspectives that are vital for navigating today’s media-saturated, digitally mediated society.

We are deeply grateful to the SEARCH journal for the opportunity to collaborate on this special issue, and for the editorial team’s professionalism, meticulous handling of the review process, and unwavering commitment to academic rigour. Their support ensured that each paper was treated with the utmost care and precision, resulting in a publication of high scholarly standard.

May this special issue serve as both a reflection of our shared commitment to inclusive and sustainable progress, and an invitation to further dialogue across disciplines.

Guest Editor

Dr. Kavitha Balakrishnan
Multimedia University, Malaysia

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Beyond the buzz: The role of KOLs' communication in affecting generation Z's purchase intention

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ABSTRACT

In line with the Malaysian government's effort to achieve Sustainable Development Goal (SDG) 9, digitalization continues to proliferate the business world. Further, many businesses are now using social media to engage with consumers. The popularity of social media in business has created a new phenomenon in the market called Key Opinion Leaders (KOLs). KOLs are highly influential and can communicate as well as influence a large audience. However, not all KOLs have the same ability to communicate and to influence audiences. Hence, this research investigates the influence of KOL on consumer purchase intention in Malaysia's e-commerce landscape. The study adapted the TEARS model and examined how expertise, similarity, credibility, and attractiveness influence consumer purchase intention in e-commerce. Employing a well-designed online questionnaire, data was collected from 180 respondents aged 18–27 (Generation Z) to test the developed hypotheses. The study confirms that KOL's expertise, similarity, and attractiveness can influence consumer purchase intentions. However, credibility does not significantly predict purchase intention. Overall, this research contributes significantly to understanding the importance of influencer marketing in affecting Generation Z's purchase intention. The findings can provide valuable insights to businesses in planning their strategies. The study also extends the use of TEARS model to understand KOLs' influence.

Keywords: *Social media, SDG 9, key opinion leaders, TEARS model*

INTRODUCTION

Nowadays, social media serves as an interactive technological intermediary, enabling the creation and dissemination of information, knowledge, ideas and various expressions within virtual communities, virtual worlds, and online platforms (Kietzmann et al., 2011). Social media enables users to generate content comprising text-based entries and comments as well as digital imagery or videos; this means most of the data in social media is derived from the users' online engagement, which serves as the fundamental essence of social media platforms (Obar & Wildman, 2015).

As of October 2023, the worldwide internet user count reached 5.3 billion, comprising 65.7% of the global population while 4.95 billion people, equivalent to 61.4%, actively participated in various social media platforms (Petrosyan, 2023).

According to the latest statistics (Howarth, 2025), people spent about 2 hours and 24 minutes daily on social media. Global social media usage is projected to reach 4 trillion hours, with over half (58.4%) of the world's population actively participating in social networks, accounting for just one-third of the total 12 trillion hours spent online globally in the previous year (Kemp, 2022). Another study from Smart Insights estimated that 61.4% of the world's population engages in social media, dedicating an average of 144 minutes daily (Chaffey, 2024).

Social media's rapid popularity has had a profound and expanding impact on many aspects of our lives, including businesses (Moosa, 2024). A survey found that 43% of consumers discovered products and services on social media, with Facebook, Instagram, and TikTok having the highest conversion rates. Of these, 21% of Instagram users and 24% of Facebook users buy online depending on their discoveries. In third ranking, 39 million TikTok users explored products and reviews, with 17% making purchases (Pymnts & Pymnts, 2023). In the US, 47% of its customers have bought something on social media, with 58% remaining intrigued. According to Hansen (2023), 39% of US consumers have purchased on social media and are eager to do so again while 34% would be more likely to shop on social media if they understood data privacy. Additionally, 46% of US consumers have attended live-stream events and would do so again.

Key opinion leaders (KOLs)

KOL, or key opinion leader, is an individual with a substantial social media following, and facilitates the widespread dissemination of information to a large audience (Dwidienawati et al., 2020). Through electronic word-of-mouth (eWOM), KOLs play a crucial role by expressing views on products that can sway potential buyers in their decision-making process (Weismueller et al., 2020). As the prevalence of social media usage continues to rise, many consumers seek input from other consumers (Weismueller et al., 2020). According to Lim et al. (2017), leveraging KOL in sales strategies has demonstrated a notably higher return on investment (ROI) than alternative digital marketing approaches. Thus, collaborating with KOLs enhances the efficacy of product marketing and surpasses the effectiveness of conventional marketing strategies (Dwidienawati et al., 2020).

KOLs are well-known to users on social platforms as they have cultivated a dedicated strong following by constructing an authentic online identity (Casalo et al., 2020). KOLs develop strong emotional bonds with their audience by divulging personal content about their lifestyle and passions (Audrezet et al., 2020). Generally, social media users perceive

KOLs as appealing, genuine, and relatable (Schouten et al., 2021; Sokolova & Kefi, 2020). Thus, the positive perception of KOLs among their followers amplifies the efficacy of their messages in achieving the intended impact for brands (Djafarova & Rushworth, 2017).

KOLs can be classified by their number of followers, which illustrates their online influence (Morteo, 2018). Celebrity KOLs, with over 1 million social media followers, often work in music or cinema (Carrillat & Ilicic, 2019). Mega-KOLs, with over one million followers, gain fame through social media content creation (Ismail, 2023). Macro-KOLs, with 100,000 to one million followers, charge lower prices and gain popularity online (Monacho & Slamet, 2023). Micro-KOLs with 10,000 to 100,000 followers usually have a local audience (Campbell & Farrell, 2020). Lastly, nano-KOLs, with fewer than 10,000 followers, focus on friends, acquaintances, and close connections and often collaborate with merchants on their own (Liu et al., 2021). According to Statista (2025), the market size for media influencer has grown more than three times since 2020. In 2025, the market of influencer marketing is estimated to reach up to 33 billion U.S. dollars.

KOLs influence new trends and preferences, making items more appealing (Megane et al., 2019). Each year, they become more influential in consumer decision-making (Lou & Yuan, 2019). According to Megane et al. (2019), sponsored KOL posts have increased from 3.6 million in 2015 to 24.2 million by the end of 2018. In 2023, influencer marketing expenditure is expected to reach \$21.1 billion, a 29% increase from the previous year's \$16.4 billion (West, 2024). KOLs, as a brand's voice, boost product awareness and desirability, with attractiveness and trustworthiness influencing their positive correlation with purchase intent (Megane et al., 2019). Markets & Markets (2020) predicted that influencer marketing platforms will grow from USD 6.0 billion in 2020 to USD 24.1 billion in 2025. Similarly, Linqia (2020) contended that influencer marketing has matured, with KOLs developing the ability and understanding to assist brands in connecting with their target audience.

KOLs in Malaysia

The average time spent on social media is 2.25 hours per day worldwide (Kemp, 2021), while in Malaysia, it is notably higher at 2 hours 47 minutes (Liew et al., 2021; Statista, 2023). The report reveals that 44.8% of global internet users seek brand information on social media, with Malaysia leading at 59.5% (Liew et al., 2021). Essentially, the surge in social media growth and usage has significantly impacted marketing strategies (Chaffey, 2024), further emphasising the role and influence of social media influencers.

The significance of social media KOLs is growing in Malaysia, given that about 75% of Malaysian consumers are familiar with KOLs and have followed at least one on social media (Statista, 2023). Further, there is a shift in marketing strategies among Malaysian companies, allocating increased budgets to engage with social influencers ("Engaging the power", 2020). According to a 2023 survey by Rakuten Insight on social commerce purchases in Malaysia, 37% of participants reported engaging in regular shopping activities on social media over the past year (Statista, 2023).

The influence of KOLs on generation Z

Gen Z, also known as iGeneration, Post-Millennials, Gen Wii, or NextGen, is the next generation after Millennials and is subject to varied nomenclature (Raphelson, 2014; Turner, 2015). This generation's definition sparks considerable disagreement, with demographers placing its inception between the early 1990s and 2000 (Seemiller & Grace,

2017). Gen Z individuals, descendants of Baby Boomers, and in some cases, offspring of Millennials, have lived a significant portion of their lives in the era of Internet technology, where virtual connectivity has been a constant (Turner, 2015). The advent of internet and uninterrupted access to information have uniquely positioned this generation to comprehend global imperatives. Research indicates that Generation Z displays unprecedented diversity compared to previous ones in the USA (Shatto & Erwin, 2016). Notably, the impact of the internet, mainly through social media, is more profound on Gen Z than on its predecessor, Gen Y (Accenture, 2017).

According to He (2024), Generation Z is a generation that continuously faces information overload, in particular advertisements and varied information. This renders traditional marketing communication tools less effective in capturing their attention. However, it is easier for Generation Z to accept recommendations from KOLs who present a fun image. Also, in terms of consumer behaviour, Generation Z's purchases are usually driven by self-gratification, in which they wish to have an emotional connection with the brand. KOLs are very good in creating the bridge between the consumer and also the brand. Hence, KOLs have more potency in influencing Generation Z.

Individuals belonging to Generation Z, specifically those aged between 16 and 24, exhibit the highest level of dependency on social media, especially females ("How much time", 2022). On average, Generation Z females spend approximately 3 hours and 11 minutes online, surpassing their male peers who spend 2 hours and 40 minutes. A recent study revealed the significant impact of social media influencers and KOL, on Gen Z's online consumer behaviour particularly on the Douyin platform (Liu, 2023). In Douyin e-commerce, Generation Z demonstrated significant purchasing power, representing the fastest growth rate among all demographics, with a collective spending of 4 trillion RMB (\$620 billion) in China in 2020 (Seo, 2021). Looking ahead, Generation Z is estimated to contribute to a substantial social media spending amount of at least 5 trillion RMB (\$740 million) in the coming years (Seo, 2021).

Research problem

Communicating with Generation Z is particularly crucial as it is very challenging to reach them through conventional media. Generation Z spends more time in social media platforms such as YouTube (65%), TikTok (43%), and Facebook (40%). These platforms are significant sources of communication for Generation Z (Brito, 2023). KOLs must continuously improve their communication to foster a shared interest and trust when they are communicating with their audience (Lou & Kim, 2019; Tazlia et al., 2023). However, the over-saturation of KOLs and the overwhelming content volume on social media, coupled with the transient nature of fame, pose challenges for audiences to trust KOLs.

In addition, according to a report by Advertising + Marketing (2019), the level of engagement with KOLs in Malaysia is notably lower compared to Indonesia and Thailand. The report presented audience quality rates, which explains the engagement between an influencer and their followers. Malaysian influencers received an audience quality rate of 31.2 percentile. In contrast, Indonesia and Thailand influencers scored higher audience quality grades, which are 51.0 percentile and 37.9 percentile, respectively. Further, Rakuten Insight reported that around 67% of Malaysian Generation Z did not make any purchases promoted by KOLs (Statista, 2023). Hence, this suggests that the KOLs in the Malaysian market are less influential than other countries.

The present study delves into examining Malaysian KOLs' influence on Generation Z's purchasing decisions. It looks into the significant role of social media KOLs in YouTube, TikTok, and Facebook in influencing the purchasing decisions of Generation Z. The study is important as it underscores the necessity for social media marketers to formulate targeted marketing strategies for Generation Z as they are the main users of social media. According to He (2024), each KOL carries different positioning. Hence, marketers have to be careful in selecting the most suitable KOL to promote their company products or services. Choosing the right KOL will enable a business to maximise its brand exposure and influence consumer purchase intention.

Based on this discussion, the research problem is to study the influence of the characteristics of KOL on Generation Z's consumer purchase intention. Correspondingly, the research objective is to investigate the relationship between KOL's characteristics: expertise, similarity, credibility, and attractiveness in influencing purchase intention among Gen Z.

LITERATURE REVIEW

The TEARS model, introduced by Shimp (2003), encompasses attributes that align with the source credibility theory and source attractiveness theory, as proposed by McGuire (1968). The model primarily centres on key factors influencing an endorser's effectiveness in communication, encompassing trustworthiness and expertise derived from the source credibility theory, along with attractiveness, respect, and similarity from the source attractiveness theory (McGuire, 1968). Celebrity endorsement studies frequently integrate attributes of the TEARS model to gain insights into consumer behaviour. The TEARS model is important for this study as it focuses on the credibility and attractiveness of KOLs in the communication process, which are important in influencing consumer purchase intention (Oteh et al., 2023).

TEARS model

Shimp (2003) introduced the TEARS model, emphasising two general attributes, which are credibility and attractiveness. Credibility involves trustworthiness and expertise, where trustworthiness relies on the endorser's believability and perceived motivations, and expertise is linked to specific skills or knowledge. The second general feature, attractiveness, is connected to the source's physical attractiveness, respect, and similarities (Chan et al., 2021; Freeman & Chen, 2015). Physical attractiveness increases audience brand judgment (Kahle & Homer, 1985), while personal characteristics and accomplishments garner respect (Freeman & Chen, 2015). When the source traits match audience traits, trustworthiness increases (Desphande and Stayman, 1994). The TEARS model shows how these traits affect KOLs' persuasive and communication skills (Shimp, 2003). However, this study will eliminate respect and trustworthiness for reasons that will be discussed next.

The exclusion of respect and trustworthiness from the TEARS model

Previous research indicates that respect of source does not yield a favourable and statistically significant influence on consumers' intention to purchase, especially in the online environment (AlFarraj et al., 2021; Taillon et al., 2020). The nature of KOL is more on fun and interesting content, which does not add to the KOL's respect and

trustworthiness (House of Marketers, 2023). Hence, these two variables were excluded from the present study.

Compared to trustworthiness and respect, previous research shows that credibility is a more suitable construct for studying the influence of online influencers on consumer purchase intention. Marketing literature shows that the perceived credibility of influencers is linked to the effectiveness of the communicated message, primarily relying on the acknowledged levels of trustworthiness and expertise possessed by the influencer (AlFarraj et al., 2021), while trustworthiness depends on the message of the communication. According to Manaher (2023), in the realm of online influencers, the distinction between credibility and trustworthiness holds significant weight, with credibility typically taking precedence over trustworthiness. According to Liu and Zheng (2024), if a trustworthy influencer was to have a negative encounter, it would not affect their credibility; they can still leverage their expertise to maintain influence and potentially sway consumer purchase decisions.

METHODS

Hypotheses development

Research indicates that individuals tend to trust specialists more than non-experts. When consumers perceive an influencer as an expert, their trust increases, leading to increased purchase intentions. Expertise in their field also establishes trust with their audience, increasing the likelihood of purchasing based on their suggestions (AlFarraj et al., 2021; Al-Mu'an et al., 2023). This positive correlation between expertise and attitude is evident in online shopping (Hussain & Ali, 2021). Based on this, the following hypothesis is formed:

H1: There is a relationship between KOL's expertise and consumer purchase intention among Generation Z.

Desphande and Stayman (1994) highlighted that people are more susceptible to influence when they trust those who share similarities with them. Numerous prior studies consistently demonstrate a favourable association between source similarities and the intention to make a purchase (Ahmad et al., 2019; Lou & Yuan, 2019). Additionally, Rezai et al. (2020) found a positive correlation between similarities with influencers and purchasing intention, suggesting that perceiving similarities with an influencer, whether through shared hobbies, interests, or styles, can positively impact followers' trust in influencers and subsequently, influence their purchasing intentions. Based on this, we suggest the following hypothesis:

H2: There is a relationship between KOL's similarities and consumer purchase intention among Generation Z.

Based on Sertoglu et al.'s work (2014), the study confirms a positive and substantiated connection between Instagram users' perceived credibility of an influencer and their intention to make a purchase, indicating that increased credibility levels contribute to more effective purchase intentions. Rathnayake and Lakshika (2023) identified a noteworthy positive impact of influencer credibility on purchase intention. Influencers, recognised as credible sources, play a crucial role in furnishing valuable information to followers, positively

shaping attitudes, and potentially guiding purchasing decisions (Demba et al., 2019; Tanha, 2020). Similarly, a study conducted by Oracle (2022) uncovered that 37% of consumers trust social media influencers, with Generation Z and Millennials showing twice the reliance on influencers compared to other generations. Accordingly, the following is hypothesised:

H3: There is a relationship between KOL's credibility and consumer purchase intention among Generation Z.

According to past studies, customers are attracted to beautiful people, and influencers with attractiveness, intellect, or charisma generally have a large following (Rahmah & Ren, 2019). Social media influencers improve brand image (Hermenda et al., 2019), and their attractiveness influences consumers' purchase intentions (Torres et al., 2019). Attractive celebrities inspire their followers to emulate their lifestyle. Influencers' appealing and attractive personalities often compel followers to buy the same items they use (Rahmah & Ren, 2019; Torres et al., 2019). With this, the following hypothesis is suggested:

H4: There is a relationship between KOL's attractiveness and consumer purchase intention among Generation Z.

Sampling plan

The study involved individuals who belong to Generation Z as they are the main users of social media. Generation Z are individuals aged 12 to 27 years old. However, data collection was conducted with those aged between 18 and 27 years old, excluding individuals aged 12 to 17 years old. This decision was guided by the Child Act 2001 in Malaysia, which defines those under 18 as children, and protected under the law in Malaysia. The exclusion of the younger age group is motivated by their legal status as minors, needing more capacity for independent financial transactions (Vignes, 2024).

Convenience sampling was chosen for the study due to its accessibility and cost-effectiveness. To ensure relevance and eligibility, study respondents must be aged 18 to 27 and have had recent purchase experiences through KOLs within the past 6 months. This method addresses research limitations and allows inclusion of friends or family members.

Data collection

Primary data was collected using a structured online questionnaire. The online questionnaire consisted of three sections, with the first section collecting data about respondents' profile, followed by consumer behaviour in social media, and lastly, the items to measure the study variables. A few filtering questions were used to check online purchase experience and engagement with KOLs. The filtering questions helped choose the right respondents to participate in the study. All the variables used in the questionnaire were adopted from past research (Dwivedi et al., 2015; Lou & Kim, 2019; Lou et al., 2020; Lou & Yuan, 2019; Thusyanthy, 2018). The items were verified by experts from the industry and also academic. A pilot testing involving 30 respondents was conducted first before the actual data collection. The questionnaire used the 5-point Likert scale with for response options, ranging from "Completely disagree" to "Completely agree". The questionnaires were posted on Instagram, Facebook, WhatsApp, and email to reach a broad target sample.

FINDINGS AND DISCUSSION

Respondents' profile

In total, 180 respondents participated in the study. The majority were female (52%), with 48% male. The age range was 18–27 years old, with 51% being 22–23 years old. A quarter of the respondents were employed (26%), while 71% identified as students.

Education levels were diverse among the respondents, with 7% having O-level or SPM qualifications, 10% with foundation studies, 22% with diploma studies, and 59% bachelor degrees. Only 2% had a master's degree, and 4% had a PhD or higher qualifications. The majority of respondents were students with a focus on education and academic pursuits.

This survey also revealed a variety of KOL categories among respondents. Lifestyle KOLs had the most following, with 109 users choosing daily life content. This is followed by travel KOLs (91 respondents), beauty KOLs (85 respondents), food KOLs (85 respondents), health and wellness KOLs (71 respondents), entertainment KOLs (71 respondents), technological KOLs (64 respondents), gaming KOLs (59 respondents) and lastly, parenting KOLs (31 respondents).

Reliability analysis

All the variables in the study exhibit very high reliability, generating Cronbach's alpha values ranging from 0.899 to 0.945. Expertise is particularly notable, showing a robust reliability with a Cronbach's alpha of 0.945. Next, similarity and attractiveness demonstrate commendable reliability, scoring above 0.9 with values of 0.942 and 0.932, respectively. Credibility follows closely behind with a reliability coefficient of 0.899, still within an acceptable range. Purchase intention also indicates solid reliability, with a score of 0.915.

Multiple regression analysis

The R-square value presented in the model summary (Table 1) explains the relationship between the independent variables and the influence of KOLs on consumer purchase intention.

Table 1. Multiple regression analysis

Model	R	R-square	Adjusted R-square	Std. Error of the Estimate	F	Sig
1	0.727 ^a	0.528	0.517	0.72395	48.995	<0.001 ^a

^a. Predictors: (Constant), Attractiveness, Expertise, Similarity, Credibility

^b. Dependent Variable: Purchase Intention

Based on Table 1, the R-square value of 0.528 indicates that the four independent variables, attractiveness, expertise, similarity, and credibility, collectively explain 52.8% of the influence exerted by KOLs on consumer purchase intention. The adjusted R-square value of 0.517 also refined this estimate to adjust for the number of predictors in the model. The standard error of the estimate, at 0.72395, reflects the average deviation between observed and predicted purchase intention values. Furthermore, the regression model is deemed statistically significant with an F-statistic of 48.995 and a corresponding p-value below 0.001. In conclusion, these results highlight the considerable impact of online influencers' attributes, such as attractiveness, expertise, similarity, and credibility, on shaping consumer purchase intentions.

Table 2. Coefficients

Model	Beta	Sig.
Expertise	0.193	0.014
Similarity	0.328	<0.001
Credibility	0.012	0.880
Attractiveness	0.296	<0.001

Dependent Variable: Purchase Intention

The p-value obtained for expertise and purchase intention was 0.014, which is less than 0.000, indicating there is the relationship between expertise and consumer purchase intention. Thus, H1 is supported. Similarly, the p-values for similarity and attractiveness are also less than 0.05; hence, H2 and H3 are supported as well. On the other hand, the p-value obtained for credibility was 0.880, which is more than 0.05, hence H3 is not supported. The overall results show that similarity is the most influential variable, with the highest beta value (0.328), followed by attractiveness (0.296) and expertise (0.193).

The results suggest that as the expertise of KOLs increases, the purchase intention of their Generation Z followers also increases. Previous research have shown the substantial influence of KOLs' knowledge on customer behaviour (AlFarraj et al., 2021; Al Jaed & Badghish, 2021; Hussain & Ali, 2021; Jamil & ul Hassan, 2014). AlFarraj et al. (2021) highlighted a notable tendency of KOLs to hold a bachelor's or master's degree, reflecting a significant focus on education among them, which enhances their perceived expertise (Hussain & Ali, 2021). Additionally, when influencers are regarded as experts, it cultivates a favourable disposition towards online buying (Al Jaed & Badghish, 2021; Jamil & ul Hassan, 2014).

The results also demonstrate that similarity significantly influences Generation Z's purchasing decisions. Source similarity has been consistently linked to purchase intention in earlier studies. Lou and Yuan (2018) discovered that source similarity increases brand trust, brand awareness, and purchase intentions. Similarly, Ahmad et al. (2019) found that social media celebrity endorsements significantly influence customers' purchase intentions by boosting a brand image. Studies also found that influencers' familiarity, likeness, beauty, and likability boost their persuasive power when marketing products and services (Ohanian, 1990; Prendergast et al., 2014).

In addition, KOLs' attractiveness does affect the purchase intention among Generation Z consumers. This corroborates with Lou and Yuan (2019) who found that influencer appeal in branded content increases follower trust and purchase intentions. Digital influencers' attractiveness affects consumer behaviour, with high brand attachment mirroring purchase intentions (AlFarraj et al., 2021; Torres et al., 2019; Wiedmann & Mettenheim, 2021). Likewise, Chekima et al. (2020) revealed source attractiveness to be a favourable predictor among Malaysian consumers. Liew et al. (2021) also found that social media influencers' physical attractiveness (beauty, handsomeness, sexiness, and elegance) strongly influence Malaysian female consumers' purchasing decisions.

Lastly, in regard to the relationship between credibility and purchase intention among Generation Z consumers, the results reveal that it is not statistically significant. Generation Z distrusts KOLs due to their "inauthentic authenticity" (Edwards, 2023). According to Speller (2019), consumers believe most content is manufactured, filtered, and manipulated when KOLs recommend products or services. KOLs are also perceived

as intentionally promoting items that they themselves do not utilise. Kemp (2022) also found that consumers favour user-generated content (UGC) over KOLs' material. Kemp's survey found that 86% of consumers trust brands that post customer-created content, compared to 12% who buy influencer-promoted products. This suggests that customers believe UGC as more honest and relatable. Based on these findings, the association between internet KOLs' credibility and consumer purchasing intention is unsupported.

CONTRIBUTIONS AND IMPLICATIONS / CONCLUSION

Managerial implications

The findings highlight the importance of KOLs in today's marketing. Since, KOL marketing is rapidly proliferating, governments should take heed and formulate legislation and regulations that can regulate KOL marketing transparency and ethics. These legislations and policies are very important to protect consumers, businesses and also KOLs. The government can draft KOL marketing rules by analysing how KOLs' credibility affects consumer behaviour. The government can also require KOLs to disclose sponsored content publicly using hashtags like #ad or #sponsored. They can also fine or suspend influencers and brands that engage in deceptive advertising. Related government agencies can also work together with industry stakeholders like KOLs, brands, and advertising agencies to develop best practices and ethical standards in KOL marketing. This can safeguard consumers and make the digital economy more safer.

Businesses implications

Based on the findings, attractiveness is the most influential variable of KOLs, followed by expertise and skills. Businesses can utilise this finding to modify their marketing strategy to attract more customers. First, they should work with visually appealing KOLs who match their target audience's style. Investing in charming, elegant, stylish KOLs can boost brand and product appeal. Visually appealing content that showcases products and services can also boost consumer engagement. Additionally, brands should carefully choose KOLs whose lifestyles, hobbies, and values match their target consumers. Collaborations with KOLs who match audience interests and inclinations can boost marketing efforts and consumer purchase intention.

Since there is no correlation between Generation Z consumer purchase intention and KOLs credibility, businesses may not need to focus on credibility in their marketing efforts.

Limitations of the study

This research focused on Generation Z in Malaysia, which may limit its generalisability to other regions and generations due to cultural, economic, and social differences. To address this, a comprehensive background research comparing KOL marketing dynamics in Malaysia with that of other Southeast Asian countries was included. Future research could expand the geographic scope to include multiple countries for a more comparative analysis. Next, data collection relied on voluntary survey responses, which can lead to non-response bias. To address this, the survey was distributed widely through social media platforms, follow-up was carried out through reminders, and demographic data analysis was done to ensure a more representative sample. Future research may consider expanding

the study to include different generations or platforms to compare the influence of KOLs on different generations and platforms.

Conclusion

KOLs are now essential for businesses to promote their products and brands on social media. Many companies use KOLs to reach their target customers, especially Generation Z. However, as the number of KOLs grows, businesses must find ways to evaluate which KOLs are best at promoting and communicating their products and services. The present study examined the impact of knowledge, similarity, credibility, and attractiveness on consumer purchase intention. Using the TEARS model, the study found that KOLs' expertise, similarity, and attractiveness affect the purchase intention of Generation Z. This research fills a vacuum in the literature by providing demographically relevant and localised perspectives on how the TEARS model can be applied on Malaysia's Generation Z in terms of KOLs' influence. The findings also has implications on marketing for Generation Z, bridging theoretical study and pragmatic practice. In particular, the study guides businesses on the types of KOLs they need to employ to influence their target consumers.

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Antecedents of purchase intention of Korean consumer products: A study of Malaysian K-drama binge- watchers

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ABSTRACT

As a result of the *Hallyu* phenomenon in the early 2000s, K-dramas have become very popular in Malaysia. Although the Korean culture may be divergent in a Muslim-majority country like Malaysia, K-drama audiences continue to show their enthusiasm for the culture by binge-watching episodes on streaming platforms. With streaming platforms, K-drama audiences can become more personally involved with their favourite K-dramas, by customising content and forming parasocial bonds with K-drama celebrities. Thus, this study aims to examine factors related to streaming audience involvement that influence consumer purchasing intentions among K-drama binge-watchers in Malaysia. Specifically, we predict that binge-watching (BW), parasocial interaction (PSI) and consumer cultural affinity (CCA) with Korea may influence intention to purchase (PI) Korean consumer products. Also, BW and PSI functioned as the mediators. Five hypotheses were proposed in this study to examine the predictors of PI. This study used a cross-sectional survey design. Respondents were undergraduate students, and a Google Form questionnaire was distributed to respondents (N = 213). Hayes PROCESS macro (Model 4) was used for the parallel mediation analyses. All five hypotheses were supported. The repercussions of these findings on the role of audience involvement via streaming platforms and its effect on consumer purchase decisions were also discussed.

Keywords: ***Audience involvement, binge-watching, consumer affinity, parasocial interaction, purchase intentions***

INTRODUCTION

Hallyu, or the K-wave refers to the Korean entertainment industry that includes both Korean popular music and dramas. The rise of K-dramas has not only reshaped global entertainment consumption but has also transformed how streaming platforms and consumer brands engage with audiences. Audience involvement refers to the degree to which consumers are emotionally, cognitively, or behaviorally engaged with a product, brand, or marketing message (Hollebeek et al., 2014). High levels of involvement often lead to deeper processing of information, stronger attitudes, and a greater likelihood of purchase.

Audience involvement is important from the consumer behaviour perspective; the deep emotional and psychological involvement of the audience, who often form strong attachments to characters, plotlines, and even the products featured within these shows, has become a powerful driver of purchasing behavior. Scholars have established that audience involvement may involve four processes including parasocial interaction, transportation, worship, and identification (Brown, 2015). In the context of K-dramas, fans who binge-watch form deep connections with K-drama content and this may also dictate their interest in Korean cultural products. For instance, young adults who view K-dramas are becoming increasingly influenced by Korean cultural products, such as music, language, and fashion (Ing et al., 2018; Kim & Ryoo, 2007; Soo & Jamil, 2022).

Further, K-drama audiences are engaged viewers because they view the shows as more than mere entertainment; they often perceive the products showcased as part of the narrative world they are deeply invested in. In a recent study, findings indicate that product placements of Samsung in K-dramas lead to better brand recall (Farah Nabila et al., 2025). Besides, researchers have established that deep involvement can be attributed to social media interactivity among K-drama audiences. Instagram, for instance, provides an avenue for fans to engage with K-drama content, form parasocial bonds with media personae, interact with other fans, and have direct exposure to promotional activities (Azzahra, 2023; Gulshan et al., 2023).

Further, streaming platforms like Netflix, Disney Hotstar, and iQIYI have recognised the potential of K-dramas in building loyal, engaged audiences. Specifically, K-dramas are very popular among Malaysian audiences, due to its strong narrative and brilliant portrayals of characters. The interesting storylines, high-tech filming techniques, and the scenic views portrayed in the drama are also pull factors. Viewers often binge-watch a series more than once, leading to an increase in viewership (Mahanta, 2023). As viewers become more immersed in these K-dramas, they tend to develop a heightened sense of attachment to the platforms themselves, seeing them not only as entertainment providers but as essential gateways to their favourite shows (Chan et al., 2022). This affinity fosters trust, loyalty, and a sense of exclusivity, which can, in turn, extend to the products and brands featured on these platforms. Whether it is through product placements within K-dramas or brand partnerships that capitalize on the show's cultural influence, the emotional involvement of viewers can significantly impact their purchasing decisions.

Accordingly, the objective of this study is to examine the influence of consumer cultural affinity, parasocial interaction, and binge-watching on purchasing behaviour among K-drama audiences, where parasocial interaction and binge-watching serve as the mediators. The next section will outline a pertinent literature review of the study.

LITERATURE REVIEW

Theoretical underpinning

This research is underpinned by the Cultivation Theory (Gerbner et al., 1986), where the theory highlights that prolonged exposure to media (such as binge-watching) can shape the audience's perceptions of reality and reinforce cultural values and norms (Ahmed et al., 2022). In the context of this study, this leads to an increase in consumers' affinity for K-dramas, which influence purchase intention.

Hallyu phenomenon in Malaysia

The global reach of *Hallyu* is immense in that it has gained popularity and attracted audiences around the globe (Jin et al., 2021). This recent phenomenon has had a major impact on global cultural and economic landscapes, primarily through the global spread of K-dramas, contributing to heavy consumer consumption (Jin et al., 2024; Mat Yassin et al., 2024). Further, their use of social media and streaming platforms has transformed traditional fan and celebrity connections, allowing for a deeper level of involvement and development of parasocial relationships (Azzahra, 2023). This digital connection not only promotes fan loyalty that crosses geographical borders, but also significantly impacts their purchasing decisions (Abdullah Sani & Abdul Aziz, 2024).

In Malaysia, *Winter Sonata* was the first Korean drama that aired in 2002. It became a smash hit with more than 1.5 million viewers and paved the way for the *Hallyu* phenomenon in Malaysia (Kamarolzaman et al., 2022; Mujani et al., 2022). Not everyone shares similar enthusiasm however; there are concerns about the cultural and religious conflict between the Korean Wave and the Islamic values practiced in Malaysia (Mujani et al., 2022). Regardless of that, the Korean Wave continues to pervade Malaysia.

Its cultural impact has spread beyond music to fashion and lifestyle, appealing particularly to Gen-Z. According to Soo and Jamil (2022), K-dramas are popular among Malaysian youths, which leads to a preference for K-dramas over local productions (Jun, 2017). Moreover, Jun (2017) also reported that the limited and conservative local entertainment scene has led Malaysian youths to seek out different entertainment options, which further drives the enthusiasm for K-dramas. Gen-Z consumers, who are set to become the driving force of global economic growth (Roberts, 2023), have distinct purchasing behaviours that are in line with the rise of K-dramas, which suggests that more young consumers are learning about brands through K-drama idols. The interactions on social media platforms between K-drama idols and their fans increase their trustworthiness and appeal which in turn boosts the consumers' purchasing intentions (González Romo & Pérez Sena, 2024).

Thus, building on the previous study by Brown (2015), this study examined parasocial interaction with K-drama personae and binge-watching on streaming platforms.

Consumer cultural affinity and purchasing intentions

Consumer purchase intention (PI) refers to consumers' willingness to buy particular products or services (Keller, 2001). PI is influenced by internal and external factors. Internal factors include consumers' characteristics, such as self-identity, culture, norms, and attitude, whereas external factors consist of marketing activities that shape consumers'

perceptions of products (Carrillat et al., 2009; Ismagilova et al., 2020; Zhuang et al., 2021).

For instance, products or services that are highly visible to others, such as clothing are affected by social desirability, in addition to their quality (Engle et al., 1995; Paulhus, 1984). This is attributable to consumers' desire to gain likes and positive impressions from others (Griskevicius et al., 2010). Consumer cultural affinity (CCA) has been identified as one of the external factors that lead to purchase intentions. It is conceptualised as positive feelings or attachments towards specific foreign countries (Serrano-Arcos et al., 2022). Similarly, Obreck et al. (2008) defined CCA in the context of international consumption, as including emotions such as liking, sympathy, and attachment towards a specific foreign country. It often leads to a positive response among consumers towards products from that particular country. Research also indicates that it is an important predictor of purchase behaviour (Papadopoulos et al., 2017). Thus, when local consumers experience positive feelings and attachments towards a particular country, they may have a higher tendency to purchase products from that country.

Others have found that affinity often leads to product trust, which in turn, is positively translated to the intention to purchase foreign products, brands, and services (Guo et al., 2018; Obreck et al., 2008; Serrano-Arcos et al., 2022). As such, the following hypothesis is proposed:

H1: There is a positive relationship between CCA and PI.

Audience involvement (parasocial interactions and binge-watching) and purchasing intention

Audience involvement with a media persona is a multidimensional construct (Salmon, 1986) and is often interchangeable with other terms, such as engagement, absorption, and presence (Brown, 2015). It is broadly conceptualised as the degree of psychological response of a person to a mediated message or persona (Brown, 2015). For contemporary media audiences, media consumption can involve very high levels of involvement, such as forming parasocial bonds with mediated characters on streaming platforms (Tengku Mohd Azzman Shariffadeen et al., 2023), or with social media influencers (Shen et al., 2022; Sokolova & Kefi, 2020).

Young adults are more likely to be influenced by public figures, celebrities, influencers, and endorsers (McCormick, 2016). As these influencers become more highly visible, younger consumers could develop an imagined one-sided relationship with the influencers (Azzahra, 2023; Saldanha et al., 2020). For instance, influencers would often disclose sponsorship using captions under their post or hashtag. This act is defined as a rewarded referral (Jin et al., 2021).

Previous studies have established a positive connection between media involvement with a persona via parasocial interaction (PSI) and purchase intentions (PI) (Jansom & Pongsakornrunsilp, 2021; Khaerunnisa, 2024; Shen et al., 2022; Sokolova & Kefi, 2020; Tengku Mohd Azzman Shariffadeen & Aini Maznina, 2020). In one study conducted by Sokolova and Kefi (2020), they found that PSI with popular beauty influencers was significantly related to purchase intention. This finding also aligned with Taher et al. (2022), and Khaerunnisa (2024), who found that PSI positively impacts the purchase intention of beauty products. Shen et al. (2022) emphasised that it is important that

customers are engaged to motivate purchase intentions. Consequently, the following hypothesis is proposed:

H2: There is a positive relationship between PSI and PI.

Binge-watching (BW) is referred to as marathon viewing or watching multiple episodes of the same series continuously (Lowe et al., 2020). For some, BW consists of watching at least three episodes of the same series back-to-back in a single session (Mahmoud & Abdul Wahab, 2021; Schweidel & Moe, 2016). BW is no longer a trend, but a social norm among media audiences (Flayelle et al., 2020). BW audiences are undoubtedly engaged audiences as they can personalise their preferences related to media consumption and consequently form their own interpretations. Also, compared to non-BW, binge-watchers are more immersed and engaged with a specific program (Panda & Pandey, 2017). In this study, we also argue that audiences who are highly involved with a media persona may choose to customise content on streaming platforms by binge-watching several shows starring their favourite media personae. Therefore, the following hypothesis is suggested:

H3: There is a positive relationship between BW and PI.

The mediating role of audience involvement (parasocial interactions and binge-watching)

When K-drama viewers have a strong affinity for Korean culture, they are more likely to develop parasocial interactions with K-drama celebrities and binge-watch (Hamzah et al., 2021). These celebrities are seen as not just characters on screen but cultural symbols and personal icons. The emotional engagement connection elevates the consumer's engagement with cultural products. They not only enjoy the K-drama shows, but also foster further engagement with the K-drama celebrities and become more emotionally invested such as following the lead actor on social media, watching interviews, and attempting to emulate their lifestyle by using the same products (Hassim et al., 2019).

As the consumer feels emotionally attached to the celebrity, they are more likely to align their own identity and consumption choices with that of the celebrity's image, preferences, and lifestyle (Chiu & Ho, 2023; Taher et al., 2022). If the celebrity endorses a Korean brand or product (either explicitly or through their portrayal in a drama), the consumer may be more inclined to purchase that product. The sense of social connection with the celebrity creates a kind of influence. Bingeing also facilitates this process; streaming platforms allow the audience to customise the content they would like to watch. They may choose to heighten involvement with media personae by binge-watching several shows featuring a K-drama persona, to feel more connected to them, and associate positive feelings with the products associated with the show.

In this way, audience involvement through parasocial interaction and binge-watching (Batik & Demir, 2021; Tengku Mohd Azzman Shariffadeen et al., 2023) acts as a mediator between consumer cultural affinity and purchase intentions as it amplifies the emotional appeal of Korean consumer products featured in K-dramas. It transforms simple cultural affinity with Korean culture into a more personal, affective bond that makes the consumers more likely to engage in purchasing behaviours (Han et al., 2022).

Purchase decisions are driven by the act of deep audience involvement (i.e., parasocial relationships and binge-watching) rather than just cultural affinity. Thus, the following hypotheses are proposed:

H4: PSI will mediate the relationship between CCA and PI.

H5: BW will mediate the relationship between CCA and PI.

The conceptual framework of the study is displayed in Figure 1.

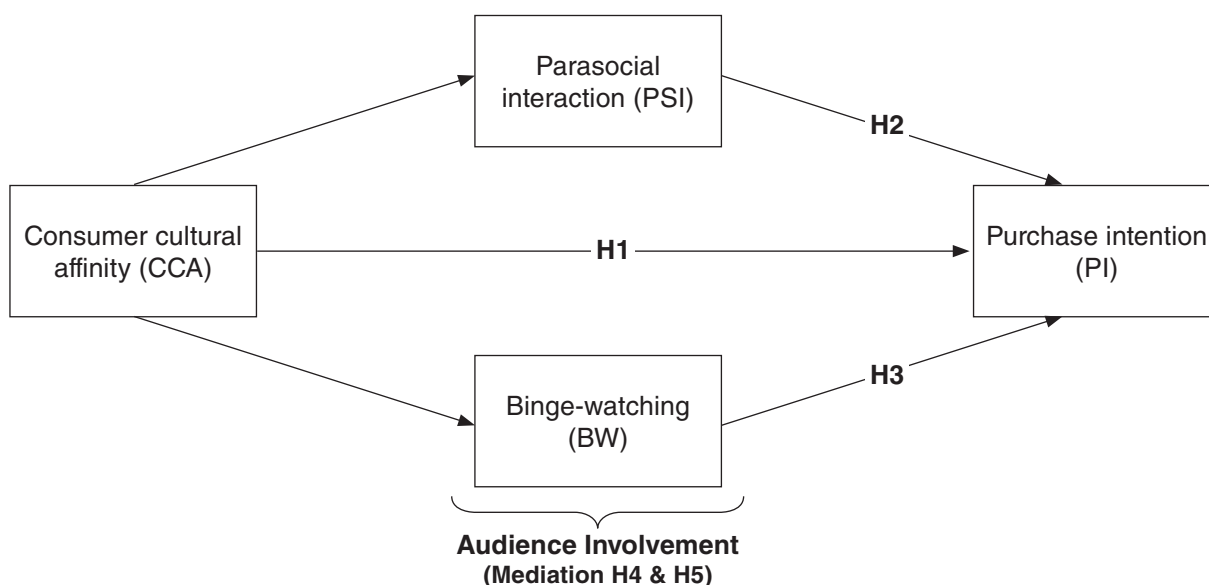


Figure 1. The conceptual framework of the study

METHODS

Procedures and participants

This study is quantitative, using a cross-sectional survey design. An online survey was constructed via Google Forms and distributed online from March–June 2023. The respondents were also briefed on informed consent in the survey instructions. Throughout the survey, the respondents were instructed to think about a favourite K-drama they watched, as well as a favourite character or celebrity from the same show.

Sampling

The target respondents of the study consisted of undergraduate Human Sciences (HS) students from a public Malaysian university in Klang Valley. They were selected as target respondents as the study required respondents who had access to streaming platforms, and binge-watch K-dramas to answer the research instrument. Using random sampling, HS students registered for various courses were recruited as survey respondents. According to Krejcie and Morgan's (1970) table, a total of 1,959 registered HS students requires a minimum of 226 students and this study falls slightly short of that target. Thus, a final sample size of 213 was obtained after data screening and removing straight-lined data. Based on the G-power analysis, (predictors: 5, power: 0.95, effect size: 0.15), the minimum sample required is 138, and the study utilised valid 213 responses, which is deemed appropriate.

Measures

Consumer cultural affinity (CCA) refers to feelings of liking, sympathy, or attachment towards a foreign country, e.g., Korea (Papadopoulos et al., 2017). The scale for CCA was adapted from Papadopoulos et al. (2017) and consisted of 7 items. A sample item read: “When I think of Korea, I think the people are friendly”. Parasocial interactions are one-sided relationships formed with a celebrity or media character. It was adapted based on a scale by Bocarnea and Brown (2007). This study context examined parasocial relationships with K-drama characters or celebrities. A sample item was: “My favourite K-drama character or celebrity makes me feel as if I am with someone I know well”. This scale had 20 items, with items 8, 18, and 20 being reverse-coded items.

Further, binge-watching (BW) in this study was conceptualized as self-perception of frequent, consecutive serial consumption of K-dramas on streaming platforms (Granow et al. 2018). The BW scale consisted of 5 items (with item 4 being a reverse-coded item) and it was adapted from Granow et al. (2018). A sample item from the scale was: “I often watch multiple episodes of one series of my favourite K-drama shows in a single session”.

Finally, purchase intentions (PI) refers to willingness to buy and examines the consumer’s intention to purchase a product or service (Chang & Hung, 2022). This study measured respondents’ intentions of purchasing Korean consumer products advertised in K-dramas using a 5-item scale adapted from Chang and Hung (2022). A sample item read: “The possibility of me buying a Korean consumer product advertised in K-dramas is high”. All items were measured on a 5-point Likert scale, with responses that ranged from (1) Strongly Disagree to (5) Strongly Agree. Table 1 displays the scales used in the study.

Table 1. Scales used in the study

No	Scale	Number of items	<i>M</i>	<i>SD</i>	Sources
1	Consumer cultural affinity (CCA)	7	3.20	.66	Papadopoulos et al. (2017)
2	Parasocial interaction (PSI)	13	2.76	.87	Bocarnea & Brown (2007)
3	Binge-watching (BW)	4	3.40	.95	Granow et al. (2017)
4	Purchase intentions (PI)	5	3.04	.92	Chang & Chen (2022)

RESULTS

Background of respondents

Descriptive analysis was carried out to examine the background of the respondents. Based on the analyses, the respondents were young and mostly female (86.9%). They were frequent users of streaming platforms, where almost half reported using Netflix almost all the time to binge-watch K-dramas (49.0%). Favourite K-drama actors or celebrities include Lee Do Hyun, Lee Min Ho, and Lee Jong Suk. The top five popular K-dramas binged-watched at the time include *Goblin*, *Reply 1988*, *Crash Landing on You*, *Weightlifting Fairy Kim Bok-Joo*, and *Hospital Playlist*.

Measurement model

To establish the measurement model, Confirmatory Factor Analysis (CFA) was conducted.

Table 2 displays the factor loadings, reliability, and validity of each of the constructs. All scales used in this study achieved good internal consistency ranging from .79 to .94, which was above the cut-off value of .70 (Hair et al., 2013). This indicates that all the scales demonstrated acceptable reliability scores. To determine convergent validity, several fit indices were examined. The model fit indices suggest an acceptable fit. The chi-square value for the default model was significant, $X^2(456) = 1432, p < .001$. The Comparative Fit Index (CFI) and The Tucker-Lewis Index (TLI) were 0.930 and 0.932 respectively, both indicating acceptable model fit. Additionally, the Root Mean Square Error of Approximation (RMSEA) was .085 suggesting that the model fit quite well in terms of error approximation.

In evaluating the measurement model, as suggested by literature (Gefen & Staub, 2005; Hair et al., 2013;), items with low factor loadings (i.e., values below .50) should be removed. All the items were loaded based on their respective construct; however, 7 items from PSI (items 2, 3, 5, 9, and re-coded items 8, 18, 20), as well as 1 item from BW (recoded item 4) were below the cut-off value and had to be removed. The composite reliability (CR) should also be above .70 (Hair et al., 2011) and all values were found above the cut-off value. Finally, the average variance extracted (AVE) should be above the cut-off value of .50 (Hair et al., 2011), and this was also met for all constructs in this study except for CCA, where the AVE is .40. However, scholars have reiterated that .40 is acceptable, if the CR is higher than 0.6, and the convergent validity of the construct is still found adequate (Fornell & Larcker, 1981).

Table 2. Factor loadings, reliability, and validity

Items	Loading	CA	CR	AVE
Consumer cultural affinity (CCA)		.811	.877	.400
CCA1	.654			
CCA2	.622			
CCA3	.591			
CCA4	.532			
CCA5	.507			
CCA6	.779			
CCA7	.662			
Parasocial interaction (PSI)		.936	.960	0.536
PSI1	.643			
PSI4	.524			
PSI6	.572			
PSI7	.763			
PSI10	.837			
PSI11	.834			
PSI12	.790			
PSI13	.715			
PSI14	.814			
PSI15	.778			
PSI16	.769			
PSI17	.843			

Table 2. (con't)

Items	Loading	CA	CR	AVE
PSI19	.523			
Binge-watching (BW)		0.793	.871	.518
BW1	.819			
BW2	.871			
BW3	.529			
BW5	.605			
Purchasing Intention (PI)		0.881	.937	.631
PI1	.731			
PI2	.771			
PI3	.875			
PI4	.889			
P15	.689			

Note: CA = Cronbach Alpha, CR = Composite Reliability, AVE = Average Variance Extracted.

To examine discriminant validity, the value of the $\sqrt{\text{AVE}}$ was compared with the correlation coefficient with each construct, where it should be higher than the correlation coefficient value between the constructs (Hair et al., 2011). This criterion was met in this study and therefore, discriminant validity was established. Details are shown in Table 3.

Table 3. Discriminant validity

Factor	CCA	PSI	BW	PI
CCA	0.626			
PSI	0.438	0.732		
BW	0.361	0.293	0.720	
PI	0.552	0.539	0.411	0.794

Note: CCA = Consumer Cultural Affinity, PSI = Parasocial Interaction, BW = Binge-Watching, PI = Purchase Intentions.

Common method bias

Since the data was collected from a single source, based on the suggestion by Kock and Lynn (2012), the data was tested for common method bias by running full collinearity testing. The results are displayed in Table 4. In this method, all the variables were regressed against a common variable, and if the variance inflation factor (VIF) is ≤ 3 , there is no bias in the study.

Table 4. Full collinearity testing

Construct	CCA	PSI	BW	PI
VIF	1.399	1.515	1.226	1.742

Note: CCA = Consumer Cultural Affinity, PSI = Parasocial Interaction, BW = Binge-Watching, PI = Purchase Intentions.

Hypotheses testing

Before conducting the hypotheses testing, the zero-order correlations analysis established

significant and positive relationships between the exogenous variable, the mediators, and the endogenous variable in the study. Correlational values for all variables ranged from .30 to .55. Multicollinearity was not present. All variance inflation factor (VIF) scores were below the cut-off value of 5.00 and the conditional index was below the cut-off value of 30, as recommended by Hair et al. (2018).

Multivariate skewness and kurtosis were assessed (Hair et al., 2017). The results reveal that the data collected was not multivariate normal, based on Mardia's multivariate skewness ($\beta = 423.25, p < .001$) and Mardia's multivariate kurtosis ($\beta = 1710.79, p < .001$). Following Hair et al.'s recommendation (2019), bootstrapping was invoked. The path coefficients, the standard errors, the *t*-values, and the *p*-values in the structural model were calculated. A sample resample of 5,000 bootstrapping procedures was used, as advocated by Ramayah et al. (2018).

Further, the PROCESS macro by Hayes (2018) was used to test the hypotheses of the study (model 4). PROCESS models are suitable for examining mediating relationships. The mediation analysis (model 4) was performed to test the main direct analyses (H1–H3) and the parallel mediation analyses (H4–H5). In this model, age and gender were entered as covariates. Approximately 44% of the variance explained in PI is attributed to CCA, PSI, BW, and the covariates. However, only gender significantly predicted PI, where males had significantly lower PI compared to females ($b = -.388, SE = .144, t = -2.689, p < .05, 95\% CI = [-.673/-.103]$). On the other hand, age is not a significant predictor of PI ($b = .025, SE = .018, t = 1.362, p = .174, 95\% CI = [-.011/.061]$).

Further, H1 exhibits a significant positive relationship between CCA and PI ($b = .398, SE = .081, t = 4.9119, p < .001, 95\% CI = [.238/.559]$). Next, H2 posits a significant positive link between PSI and PI ($b = .398, SE = .061, t = 6.452, p < .001, 95\% CI = [.276/.520]$). Additionally, H3 predicts a significant positive relationship between BW and PI ($b = .147, SE = .054, t = 2.718, p < .001, 95\% CI = [.040/.254]$). Thus, all three hypotheses (H1–H3) are supported. Detailed results for the main association analysis are shown in Table 5.

Table 5. Hypothesis testing

Hypothesis	Path coefficients	SE	<i>t</i> -value	<i>p</i> -values	BCI LL	BCI UL
H1: CCA → PI	.398	.081	4.919	< .001	.238	.559
H2: PSI → PI	.398	.061	6.451	< .001	.276	.520
H3: BW → PI	.147	.054	2.718	< .050	.040	.254

Note: CCA = Consumer Cultural Affinity, PSI = Parasocial Interaction, BW = Binge-Watching, PI = Purchase Intentions, SE = standard errors, BCI LL = Bias Corrected Interval Lower Limit, BCI UL = Bias Corrected Interval Upper Limit.

Next, the study examined the mediating effect of PSI in the relationship between CCA and PI. First, the results revealed a significant indirect effect of PSI on PI ($b = .213, t = 3.819$), supporting H4. Further, the study examined the mediating effect of BW in the relationship between CCA and PI. Additionally, the results revealed a significant indirect effect of BW on PI ($b = .061, t = 2.234$), supporting H5. The direct effect of CCA on PI in the presence of both mediators (i.e., PSI and BW) was also significant ($b = .398, t = 4.911$). In sum, both H4 and H5 are supported. Table 6 displays a summary of the parallel mediation analysis results.

Table 6. Mediation analysis summary

Relationship	Total Effect	Direct Effect	Indirect Effect	Confidence Interval		t-statistics
				Lower bound	Upper bound	
CCA → PSI → PI	.673 (.000)	.398 (.000)	(.213)	.117	.339	3.819
CCA → BW → PI	.673 (.000)	.398 (.000)	(.061)	.013	.122	2.234

Note: CCA = Consumer Cultural Affinity, PSI = Parasocial Interaction, BW = Binge-Watching, PI = Purchase Intentions.

DISCUSSION

First, the results indicate that consumer cultural affinity (CCA) has a positive impact on purchase intention (H1), in line with previous literature (e.g., Guo et al., 2018; Obreck et al., 2008). This suggests that the stronger a consumer's emotional feelings towards a particular Korean consumer product, the more likely they are to intend to purchase from that brand or company. In the context of this study, those who view K-dramas not only recognised and recalled the brands featured but also appreciated their value and felt a deeper connection to the brand through the K-drama series. Loyalty to foreign brands, products, and services, can develop with high consumer affinity (Guo et al., 2018; Obreck et al., 2008). Thus, the positive effect developed towards Korean consumer products through frequent viewing of K-dramas leads to a development of loyalty and trust towards Korean consumer products and translates into higher purchase intentions.

Next, similar to previous studies (i.e., Khaerunnisa, 2024; Shen et al., 2022; Sokolova & Kefi, 2020; Taher et al., 2022), there is a significant relationship between parasocial interaction and purchase intentions (H2). This establishes a link between media consumption and consumer behaviour. K-drama celebrities are influential figures; viewing them daily creates a social bond between them and K-drama viewers, where they influence their fans' purchasing decisions. The positive affection is more likely to transfer into the products that they endorse or use in the drama or real life. Parasocial interaction may also produce a "bandwagon effect", where the influence on fans is amplified when they see others in their online social circle also purchasing similar products.

Additionally, results indicate a positive relationship between binge-watching and purchase intentions (H3). BW and re-bingeing of K-dramas may lead to repeated exposure to brands, products, or services. Thus, the more frequently a consumer product is featured in K-dramas, the greater the chances that viewers will develop a positive attitude towards those consumer products and increase purchasing intentions.

Finally, results indicate that both parasocial interaction and binge-watching function as mediators, where there is a significant and indirect effect of both mediators in the relationship between consumer affinity and purchase intentions (H4 and H5). Affinity creates the initial cultural pull (Shin et al., 2024), while parasocial interaction and binge-watching strengthen the emotional attachment to a K-drama persona, making the consumer more likely to buy products that are associated with that celebrity or the cultural narratives they embody (Kim & Sintas, 2021). This dynamics is increasingly important in global marketing, especially in the context of the growing popularity of Korean media and culture.

IMPLICATIONS AND CONCLUSION

Implications

Overall, the study findings support the extended ideas of Brown (2015) on audience involvement by examining parasocial interaction and binge-watching behaviour among streaming platform audiences, which further supports the Cultivation Theory, where longer exposure to K-dramas (binge-watching) will shape the audience's perception and strengthen consumer cultural affinity and purchase intentions.

The findings have some pertinent implications for marketers, especially concerning K-drama audiences. In today's digital world, communication and marketing strategies have evolved from traditional media such as television, newspapers, or magazines, into social media and streaming platforms. To get consumers from streaming platforms to purchase products, marketers must realise that viewers need to be engaged and involved when consuming media content. For Malaysian marketers hoping to market their products globally, they should also learn from the Korean experience, creating cultural affinity through media content can be effective. For example, advertisers can feature local products that create emotional connections with viewers.

This study is not without limitations; the nature of the cross-sectional survey precludes assumptions about cause and effect. Future studies may use experimental methods. As this study also falls short of representativeness, the results should be interpreted with caution. A comparative sample with young adults from another university, or using a different sample among working adults in Malaysia can highlight more clearly the links between purchasing power and audience involvement. Finally, considering the popularity of K-pop music, it would be pertinent to study how audience involvement with K-pop music and cultural hybridity (Lee et al., 2020) affects purchasing intention.

Conclusion

Audience involvement continues to evolve with the use of streaming platforms. The study found that CCA, PSI, and BW affect PI positively and that PSI and BW function significantly as mediators. K-drama audiences can interactively engage with their favourite persona and form a deep emotional connection with them by binge-watching content and interacting directly with K-drama media personas on social media. Marketers, social media strategists, and content creators should capitalise on the emotional connection experienced by K-drama fans to ensure the positive reception of their products to global audiences.

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Effect of strategic visual communication, eWOM, and personal attractiveness on consumer purchase intentions in Malaysia

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ABSTRACT

With the rise of social media, consumers are increasingly influenced by digital interactions and peer recommendations, shaping their purchasing decisions. The study examined the relationship between consumer purchase behaviour and electronic word-of-mouth, while also examining the strategic visual communication strategies used by social media influencers, with personal attractiveness acting as a mediator. People generally accept that communication involves frequent social interactions between a sender and a recipient. This study, using a quantitative approach and a total of 384 valid respondents, employed purposive sampling. The analysis was conducted using PROCESS Hayes, a statistical tool for mediation analysis, to assess the indirect effects between variables. The findings support all four alternative hypotheses and reveal a statistically significant relationship between electronic word-of-mouth and strategic visual communication in relation to consumer purchasing behaviour. Additionally, PROCESS Hayes confirmed a statistically significant indirect effect of strategic visual communication and electronic word-of-mouth on consumer purchase intention through personal characteristics. The findings provide insights into the effectiveness of visual communication, electronic word-of-mouth, and the personal characteristics of influencers in influencing consumer purchasing behaviour. The study emphasizes the importance of building trust and authenticity, establishing genuine connections, being transparent, and maintaining a unique brand identity to build consumer loyalty.

Keywords: *Visual communication, influencers, electronic word-of-mouth, attractiveness, consumers, purchase intention*

INTRODUCTION

Social media comprises multiple user-driven platforms that make it easier to communicate with a wider audience, create engaging dialogues, and spread appealing content (Kaur & Kumar, 2020). According to previous studies, individuals can use social media not only to connect socially but also to acquire and share knowledge, which is the most fundamental purpose of social media (Kang, 2022). Furthermore, social media is fundamentally a digital space created by and for individuals that provides a setting conducive to networking and interactions at numerous levels, such as personal, professional, commercial, marketing, political, and societal (Kaur & Kumar, 2020).

Social media influencers are users online who have formed a strong following by sharing visual and textual details of their daily lives and who have influence and power over a certain audience (Taillon et al., 2020). As a result, influencer marketing has emerged as a dominant promotional strategy, allowing brands to approach interested audiences through personalities whom consumers perceive as trustworthy (Woodroof et al., 2020). This approach of influencer marketing is particularly effective because it efficiently and cost-effectively connects brands with engaged audiences. With social media's ability to help users build and manage networks of followers, some influencers have successfully monetised their reach, offering brand exposure and marketing opportunities (Taillon et al., 2020).

On social media, brands have a range of ways to engage with their target audience, including brand pages, sponsored posts, paid adverts, and electronic word-of mouth (Chu & Kim, 2019). Among these, influencer endorsements have gained prominence due to their direct impact on consumer purchasing behaviour. A more favourable perception of endorsed products often results in higher purchase intentions among consumers (Dinh & Lee, 2021). This study is guided by the Social Influence Theory, which provides a strong foundation for understanding the impact of influencer marketing on consumer purchasing behaviour. It explains how influencers shape consumer behaviour through credibility, expertise, and relatability. Hence, this study applies the theory to explore how influencer characteristics and communication strategies influence consumer purchasing intentions in Malaysia.

BACKGROUND

Social media platforms promote engagement through user-driven content, with social media influencers (SMIs) fostering brand loyalty more effectively than companies by forming authentic connections based on shared lifestyles and interests (Tafesse & Wood, 2022). Influencer marketing has gained momentum, offering better audience reach (Haenlein, 2020) and demonstrating higher ROI, with 65% of marketers increasing investments in 2018 (Atiq et al., 2022) and 89% reporting superior returns by 2019 (Woodroof et al., 2020), while nearly half of consumers trusted influencer recommendations and 40% made purchases based on them (Taillon et al., 2020).

Influencers gain credibility by producing visually appealing, self-generated content, often positioning themselves as experts or showcasing their lifestyles (Rohde & Mau, 2021). Consumers tend to relate more to influencers than traditional celebrities, leading to more effective product endorsements (Tafesse & Wood, 2021). In 2021, influencer

marketing was projected to generate USD \$9.7 billion, accounting for about 5% of the USD \$250 billion global online advertising market (Haenlein, 2020).

Influencers significantly shape consumer opinions and purchasing decisions through frequent interactions and trusted recommendations (Kim & Kim, 2022). Their influence is especially pronounced among younger audiences like Generation Z and Millennials (Taillon et al., 2020), with gender also playing a role—female consumers tend to adopt influencers' lifestyles and purchasing choices more readily (Kim & Kim, 2022). Notably, 72% of children reported increased product likability after viewing influencer content, and 80% believed their peers would buy those products (Folkvord et al., 2019).

The influencer marketing industry is steadily expanding, driven by consumers' preference for Instagram content that aligns with their interests and boosts happiness, ultimately shaping attitudes and purchase intentions (Joshi et al., 2023; Mazzarolo et al., 2021). Engagement on platforms like Instagram also stimulates electronic word-of-mouth (eWOM), a critical aspect of social media marketing that marketers leverage to increase brand visibility and consumer interaction (Suhud, 2021; Mazzarolo et al., 2021).

Problem statement

One key gap in the study of social media influencers and consumer behaviour is the methodological gap. Social media influencers have become a dominant force in shaping consumer behaviour, leveraging digital platforms to engage audiences and promote brands. Many studies, such as Taillon et al. (2020), have employed qualitative methods to examine the relationship between influencers and followers, emphasising the “why” behind consumer behaviour. However, Rohde and Mau (2021) highlighted the need for more quantitative research to extend current frameworks and deepen understanding of how influencer marketing drives consumer persuasion. Responding to this call, the present study investigates how strategic visual communication and electronic word-of-mouth, with personal attractiveness as a mediator, influence consumer purchasing intention in the Malaysian context.

Additionally, much of the existing research on influencer marketing has been conducted outside of Malaysia, highlighting a population gap. For example, Khan et al. (2023) noted that influencer marketing's impact on consumer purchasing intentions is still a relatively new concept in Pakistan. Similarly, in Malaysia, influencer marketing is gaining traction as many local brands transition from traditional celebrity endorsements to collaborating with social media influencers to build brand awareness. This study seeks to bridge this gap by exploring the effectiveness of social media influencers and their communication strategies in shaping consumer purchasing intentions in Malaysia.

Most studies on influencer marketing focused on direct effects, often overlooking the relationship between visual communication, eWOM, and personal attractiveness. Existing theories lack a comprehensive framework integrating these factors, particularly in emerging markets like Malaysia. This study addresses this limitation by examining how personal attractiveness mediates the relationship between strategic visual communication, eWOM, and consumer purchase intention.

Research questions

The following four research questions arise when discussing the relationship between strategic visual communication used by social media influencers and electronic word-of-

mouth with consumer purchasing intention in Malaysia where personal attractiveness is used as mediator:

1. What is the relationship between strategic visual communication used by social media influencers and consumer purchasing intention in Malaysia?
2. What is the relationship between electronic word-of-mouth and consumer purchasing intention in Malaysia?
3. What is the role of personal attractiveness as a mediator in the relationship between strategic visual communication and consumer purchasing intention in Malaysia?
4. What is the role of personal attractiveness as a mediator in the relationship between electronic word-of-mouth and consumer purchasing intention in Malaysia?

Research objectives

Based on the research questions, four research objectives were formulated in regard to strategic visual communication used by social media influencers and electronic word-of-mouth with consumer purchasing intention in Malaysia where personal attractiveness is used as mediator.

1. To investigate the relationship between strategic visual communication used by social media influencers and consumer purchasing intention in Malaysia.
2. To investigate the relationship between electronic word-of-mouth and consumer purchasing intention in Malaysia.
3. To examine the mediating role of personal attractiveness as a mediator in the relationship between strategic visual communication and consumer purchasing intention in Malaysia.
4. To examine the mediating role of personal attractiveness as a mediator in the relationship between electronic word-of-mouth and consumer purchasing intention in Malaysia.

LITERATURE REVIEW

Visual communication strategically employs images to convey information strategically, influencing viewers' perceptions and behaviour (Kujur & Singh, 2020). As it transcends language barriers, visual content resonates globally in a similar manner (Gunay, 2021). With businesses increasingly prioritising visuals, 86% European businesses increasingly now rely on visuals over text-based content (Valentini et al., 2018). The Social Influence Theory explains how influencers shape consumer behaviour, highlighting credibility as a key factor in determining whether their influence is lasting or superficial (Tafesse & Wood, 2022). Influencers enhance engagement by rewarding positive follower behaviour and fostering trust through their expertise in niche areas (Wiedmann & von Mettenheim, 2020). In this context, visual communication—defined as online behaviour driven by engaging visual content—plays a crucial role (Valentini et al., 2018).

Since visuals account for 75% of brain input, they significantly shape consumer perceptions and reactions (Kujur & Singh, 2020). Platforms such as Instagram and YouTube play a pivotal role in visual storytelling, where influencers use videos and subtle brand placements, to engage audiences and shape consumer perceptions (Atiq et al., 2022;

De Veirman et al., 2019). For instance, influencers like Ryan's World leverage relatable storytelling to impact purchasing decisions. Smiling, for example, fosters emotional connections and increases purchase intent (Trivedi & Teichert, 2019). Essentially, creative and dynamic content boosts engagement and brand awareness (Ekaputri et al., 2021; Wardhani, 2022).

eWOM involves sharing opinions online, which influences consumer perceptions and purchase intent (Daowd et al., 2021). Influencers play a critical role in generating eWOM, creating symbolic associations with products they endorse, boosting exposure and sales through trusted recommendations (Taillon et al., 2020). Brand loyalty, shaped by influencers' credibility and relatability, fosters positive eWOM and advocacy, driving sales and customer retention (Alkallas, 2023; Kim & Kim, 2022). In turn, influencer endorsements also enhance brand awareness by aligning consumer perceptions with brand expectations, amplifying reach and influencing purchasing intent (Sriram et al., 2021; Yeo, 2023). Since credibility is fundamental to this process, influencers' expertise and trustworthiness directly impact brand perception and purchase intentions (Helme, 2023; Sharipudin et al., 2023). As consumers trust online reviews, influencer endorsements act as persuasive tools for product validation (Chakraborty & Bhat, 2018). Thus, creativity, trust, and relatability play a pivotal role in driving engagement and brand success across digital platforms.

Personality traits significantly influence entrepreneurial and social media activity, impacting consumer decision-making and engagement (Lampropoulos et al., 2022; Möttus et al., 2020). Brands benefit from selecting influencers with the right personality and attractiveness, as these traits enhance endorsement effectiveness, trust, and purchase intention, particularly among Generation Z (Ladhari et al., 2020; Saima & Khan, 2020; Taillon et al., 2020; Torres et al., 2019; Yuan & Lou, 2020). Attractiveness boosts advertising success and credibility, especially when the influencer's appearance aligns with the product, making them more persuasive and cost-effective for marketing strategies (AlFarraj et al., 2021; Chan et al., 2021; Pinto & Paraminta, 2021).

Consumer purchase intention involves actions such as seeking, evaluating, and purchasing products to fulfil needs (Yin & Qiu, 2021). It comprises the process of obtaining information, analysing options, and making decisions based on experiences, preferences, and environmental factors (Lăzăroiu et al., 2020). Online purchasing intention indicates consumers' willingness to shop online (Fitri & Wulandari, 2020) and helps predict market sales and advertising effectiveness (Esmeli et al., 2021). In this context, influencer marketing shapes consumer purchase intention by fostering trust and engagement through personalised interactions. By leveraging influencers' relationships with consumers, brands can enhance recognition and purchasing intent, as consumers often rely on influencers' recommendations when making purchase decisions (Taillon et al., 2020; Zhang & Choi, 2022). Purchase intention reflects the likelihood of purchasing based on attitudes, perceptions, and trust built through social media interactions (Majeed & Kim, 2024). Influencers and well-known brands impact perceptions of quality and value, influencing Generation Z's purchasing intentions (Pinto & Paraminta, 2021). Understanding these intentions helps optimise marketing strategies and build long-term consumer relationships (Majeed & Kim, 2024).

Hypotheses construction

Visual content significantly influences consumer purchasing behaviour by increasing brand recall and trust through high-quality and visually appealing posts (Atiq et al., 2022). Consumers expect influencers to provide clear, engaging, and creative content, such as images, videos, and infographics, which boost credibility and drive brand awareness and sales (Wang et al., 2020). Informative and entertaining visuals enhance consumer trust, fostering stronger connections with brands (Jones & Lee 2022). Influencers' visually compelling posts positively impact electronic word-of-mouth, purchasing behaviour, and brand perception (Aggad & Ahmad, 2021). Creative and timely content improves engagement and reinforces the product's presence in consumers' minds (Saima & Khan, 2020). Additionally, mobile-friendly video content and user-friendly websites are vital to meet the preferences of digitally active generations (HubSpot, 2019). Thus, the strategic use of visual communication plays a pivotal role in driving purchasing intention, and the following hypothesis (H1) is proposed.

H1: Strategic visual communication factors have a significant relationship with consumer purchase intention.

Electronic word-of-mouth (eWOM) refers to consumers sharing, creating, and utilising information to influence others' purchasing decisions (Bhat & Bhat, 2020). Social media enables eWOM through reviews and recommendations, which significantly impact consumers' trust and purchasing behaviour (Leong et al., 2022). Positive eWOM fosters trust, enhances brand exposure, and drives product sales (Swärd Brattström & Habul, 2023). Interactions via eWOM build trust and shape consumer purchase intentions, positively or negatively influencing behaviour (Monfared et al., 2021). Post-purchase behaviours, including recommendations, are heavily influenced by eWOM in the digital age (Taillon et. al., 2020). Consumers' loyalty to influencers often leads to positive eWOM, stronger purchase intentions, and brand advocacy (Kim & Kim, 2022). Exploring products online and sharing information increases purchase likelihood, emphasising eWOM's role in shaping perceptions and consumer behaviour (Ngo et al., 2024). As digital platforms continue to evolve, eWOM remains a powerful tool that shapes consumer purchasing intention, and the following hypothesis (H2) is proposed.

H2: Electronic word-of-mouth factors have a significant relationship with consumer purchasing intention.

Strategic visual communication enhances consumer engagement and purchase intent by evoking positive emotions and increasing an influencer's authenticity, which fosters trust and encourages purchases (Liu et al., 2020; Choi et al., 2024). Influencers' personality traits, including trustworthiness and creativity, significantly impact consumer responses, strengthening brand awareness and purchase likelihood (Akhtar et al., 2024; Zhang & Choi, 2022). By aligning with target demographics, brands can effectively leverage influencers' personalities to drive positive consumer purchase behaviour (Slamet, 2019; Yuan, 2024). Given the pivotal role of influencers' personality on both visual communication and purchase intention, the following hypothesis (H3) is proposed.

H3: Personal attractiveness mediates the relationship between strategic visual communication and consumer purchase intention.

Trust generated through electronic word-of-mouth (eWOM) significantly impacts consumer purchasing behaviour by enhancing trust in products and services, leading to improved purchasing decisions (Liu et al., 2022; Taillon et al., 2020). eWOM fosters brand knowledge, credibility, and emotional connection, strengthening consumer confidence and influencing buying behaviour (Kim & Kim, 2022). Influencers' trustworthiness, attractiveness, and credibility are key factors driving eWOM, purchase intent, and brand loyalty (Es-Safi & Sağlam, 2021; Koay et al., 2024; Nafees et al., 2021), with influencer personalities playing a critical role in shaping both eWOM and consumer purchasing behaviour (Tien et al., 2019). Understanding the strong influence of influencer personality on both eWOM and purchasing intention, the following hypothesis (H4) is proposed.

H4: Personal attractiveness mediates the relationship between electronic word-of-mouth and consumer purchasing intention.

Conceptual framework

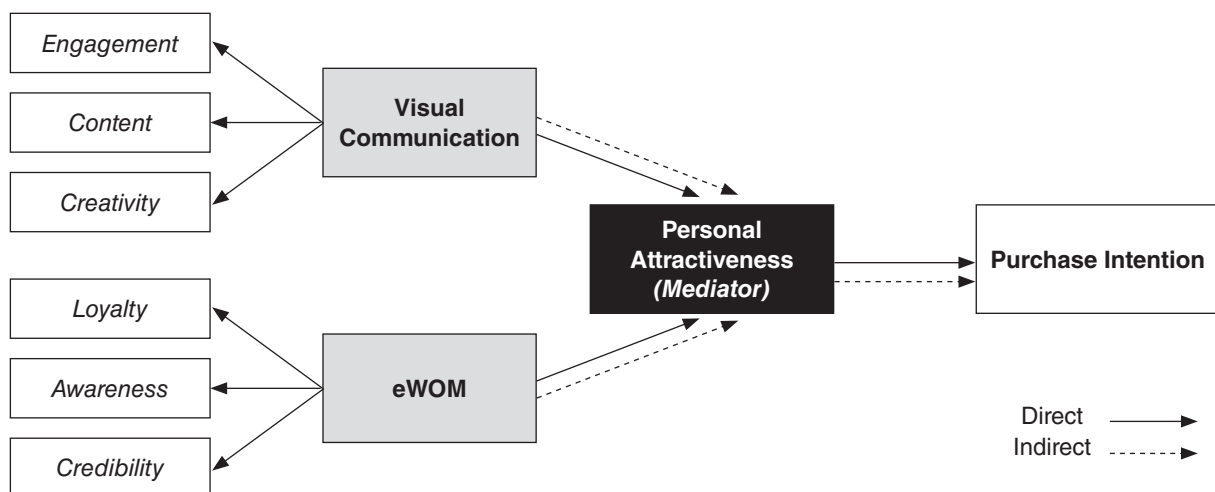


Figure 1. Conceptual framework

RESEARCH METHODOLOGY

This study explored the relationship between strategic visual communication, electronic word-of-mouth, personal characteristics, and consumer purchasing intention in Malaysia. A quantitative approach was used for data collection and analysis, offering advantages such as efficiency, comparability, and simplicity. This method allows for standardised procedures, large data sets, and straightforward interpretation.

The targeted population was Generation Z and Millennials in Malaysia, who are heavily engaged in social media and online shopping. The sample size was determined using Krejcie and Morgan's (1970) table resulting in 384 respondents.

A structured questionnaire survey was used for data collection. The survey utilised a 6-point Likert scale, offering more sensitivity than a 5-point scale. It was distributed

via Google Form over various social media platforms WhatsApp, Telegram, Facebook and Instagram. Regression analysis was chosen for its straightforward interpretation and suitability for testing mediation effects, despite some criticism regarding its rigidity. The Bootstrap method within regression offers a more accurate approach to mediation analysis (Abu-Bader & Jones, 2021; Sidhu et al., 2021), making it a robust choice for this study.

Reliability analysis

Table 1 shows the results of the reliability analysis. The items constructed are reliable and consistent as the Cronbach's alpha for all the variables are more than the minimum threshold value of 0.7.

Table 1. Reliability analysis results

Variables	Cronbach's Alpha	Number of Items
VC_Engagement	0.876	6
VC_Content	0.864	6
VC_Creativity	0.918	9
eWOM Loyalty	0.885	4
eWOM Awareness	0.892	4
eWOM Credibility	0.898	6
Personal Attractiveness	0.879	6
Purchase Intention	0.964	11

Relationship between visual communication and purchase intention

Multiple linear regression analysis was used to investigate the direct relationship between the constructs of Visual Communication and Purchase Intention. The results are summarised in Table 2. The R-square value of 0.616 indicates that 61.6% of the variation in Purchase Intention is explained by the Visual Communication constructs. The F-value of 203.024 and the p-value less than 0.001, prove that the overall regression model is significant at 0.1%.

Table 2. Results of multiple regression analysis of visual communication factors and purchase intention

R-square	0.616				
Adjusted R-square	0.613				
F	203.24				
Sig.	<0.001				
Coefficients Table					
	Unstandardized Coefficients		t	Sig.	VIF
	B	Std. Error			
(Constant)	.342	.212	1.614	.107	
VCEngagement	.433	.046	9.311	<.001	1.948
VCContent	.590	.060	9.845	<.001	2.494
VCCreativity	-.146	.054	-2.709	.007	1.515

a. Dependent Variable: Purchase Intention

The results in the coefficient table reveal that Engagement (Beta = 0.433, p-value < 0.001), Content (Beta = 0.59, p-value < 0.001), Creativity (Beta = -0.146, p-value < 0.005), have a significant effect on Purchase Intention. Therefore, hypotheses H1, H2, and H3 are substantiated.

Relationship between visual communication and personal attractiveness

The results of the multiple linear regression analysis to study the relationship between the constructs of Visual Communication and Personal Attractiveness are presented in Table 3. The R-square value of 0.411 shows that 41.1% of the variation in Personal Attractiveness is explained by the Visual Communication constructs. The F-value of 88.37 and the p-value less than 0.001, prove that the overall regression model is significant at 0.1%.

Table 3. Results of multiple regression analysis of visual communication factors and personal attractiveness

R-square	0.411				
Adjusted R-square	0.406				
F	88.37				
Sig.	<0.001				
Coefficients Table					
	Unstandardized Coefficients		t	Sig.	VIF
	B	Std. Error			
(Constant)	1.135	.204	5.558	<.001	
VCEngagement	.135	.045	3.009	.003	1.948
VCContent	.347	.058	6.000	<.001	2.494
VCCreativity	.221	.052	4.244	<.001	1.515

a. Dependent Variable: Personal Attractiveness

The results in the coefficient table show that Engagement (Beta = 0.135, p-value < 0.005), Content (Beta = 0.347, p-value < 0.001), Creativity (Beta = -0.221, p-value < 0.001), have a significant effect on the Purchase Intention. Therefore, hypotheses H1 is supported.

Relationship between e-WOM and purchase intention

The results of the multiple linear regression analysis to investigate the relationship between the constructs of eWOM and Purchase Intention are presented in Table 4. The R-square value of 0.8 indicates that 80% of the variation in Purchase Intention is explained by the e-WOM constructs. The F-value of 505.29 and the p-value less than 0.001, prove that the overall regression model is significant at 0.1%.

Table 4. Results of multiple regression analysis of eWOM and purchase intention

R-square	0.8				
Adjusted R-square	0.798				
F	505.29				
Sig.	<0.001				
Coefficients Table					
	Unstandardized Coefficients		t	Sig.	VIF
	B	Std. Error			
(Constant)	-.118	.097	-1.215	.225	
eWOMLoyalty	.316	.044	7.177	<.001	3.771
eWOMAwareness	.311	.050	6.181	<.001	4.605
eWOMCredibiltiy	.372	.042	8.813	<.001	2.801

a. Dependent Variable: Purchase Intention

Based on the coefficient table, the variables, namely Loyalty (Beta = 0.316, p-value < 0.001), Awareness (Beta = 0.311, p-value < 0.001), Credibility (Beta = 0.372, p-value < 0.001), have a significant relationship with Purchase Intention. Therefore, hypotheses H2 is substantiated.

Relationship between eWOM and personal attractiveness

Table 5 illustrates the results of the multiple linear regression analysis to investigate the relationship between the constructs of eWOM and Personal Attractiveness. The R-square value of 0.8 indicates that 80% of the variation in Purchase Intention is explained by the e-WOM constructs. The F-value of 505.29 and the p-value less than 0.001, prove that the overall regression model is significant at 0.1%.

Table 5. Results of multiple regression analysis of e-WOM and personal attractiveness

R-square	0.519				
Adjusted R-square	0.515				
F	136.428				
Sig.	<0.001				
Coefficients Table					
	Unstandardized Coefficients		t	Sig.	VIF
	B	Std. Error			
(Constant)	1.743	.117	14.860	<.001	
eWOMLoyalty	.021	.053	.390	.697	3.771
eWOMAwareness	.150	.061	2.467	.014	4.605
eWOMCredibiltiy	.462	.051	9.057	<.001	2.801

a. Dependent Variable: Personal Attractiveness

Based on the coefficient table, the variables, namely Awareness (Beta = 0.15, p-value < 0.05) and Credibility (Beta = 0.462, p-value < 0.001), have a significant relationship with the personal attractiveness. However, the p-value for Loyalty is greater than 0.05,

hence it does not have a significant impact on the personal attractiveness. Thus, H2 is not fully supported.

Mediation analysis by SPSS Process Macro

SPSS Process Macro Version 4.2 was used to perform mediation analysis. The indirect effect was studied based on 5,000 bootstrap samples. The bootstrapping confidence level that does not include zero indicates a significant mediation effect.

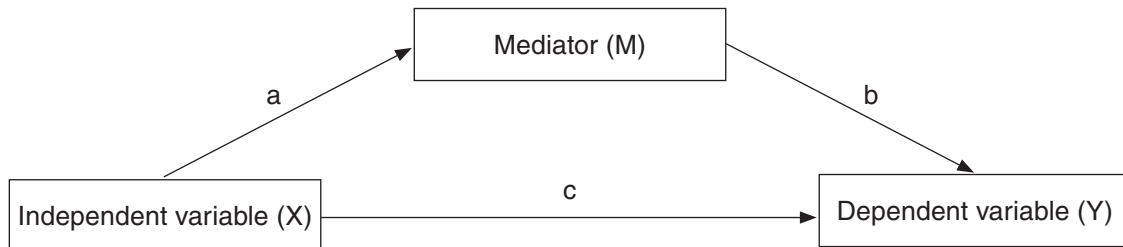


Figure 2. Simple mediation model

Table 6 presents the mediation analysis results for the relationships between Visual Communication (VC), Personal Attractiveness (PA), and Purchase Intention (PI). The analysis shows a significant positive relationship between VC and PA ($\beta = 0.7175$, $t = 15.9911$, $p < 0.001$), and between PA and PI ($\beta = 0.4380$, $t = 7.6595$, $p < 0.001$). The direct effect of VC on PI is also significant ($\beta = 0.6907$, $p < 0.0001$), and the indirect effect through PA, based on 5,000 bootstrap samples, is significant (CI = 0.2122, 0.4228), confirming that PA mediates the VC-PI relationship. Thus, hypothesis H3 is supported.

Table 6. Mediation analysis results of Visual Communication (VC) → Personal Attractiveness (PA) → Purchase Intention (PI)

Variable/ effect	β	SE	t	p	95% Confidence Interval	
					LLCI	ULCI
VC → PA (path 'a')	0.7175	0.0449	15.9911	.0000	0.6293	0.8057
PA → PI (path 'b')	0.4380	0.0572	7.6595	0.0000	0.3256	0.5504
Effects						
Direct VC → PA (path 'c')	0.6907	0.0648	10.6599	0.0000	0.5633	0.8181
Indirect* VC → PA → PI	0.3143	0.0534			0.2122	0.4228

* Number of bootstrap samples for percentile bootstrap confidence intervals: 5,000

Table 7 presents the mediation analysis of eWOM, Personal Attractiveness (PA), and Purchase Intention (PI). The results show that eWOM significantly influences PA ($\beta = 0.6278$, $t = 19.745$, $p < 0.001$), but Personal Attractiveness does not significantly impact Purchase Intention ($\beta = 0.0226$, $t = 0.0424$, $p = 0.5945$). Additionally, the direct effect of eWOM on PI is significant ($\beta = 0.9961$, $p < 0.0001$), but the indirect effect of Personal Attractiveness as a mediator is not significant, as the confidence interval includes zero (-0.0442, 0.0768). Therefore, hypothesis H4 is not supported.

Table 7. Mediation analysis results of eWOM → Personal Attractiveness (PA) → Purchase Intention (PI)

Variable/ effect	β	SE	t	p	95% Confidence Interval	
					LLCI	ULCI
e-WOM → PA (path 'a')	0.6278	0.0318	19.745	0.0000	0.5653	0.6903
PA → PI (path 'b')	0.0226	0.0424	0.5328	0.5945	-0.0608	0.1061
<i>Effects</i>						
Direct e-WOM → PA (path 'c')	0.9961	0.0375	26.5704	0.0000	0.9224	0.8181
Indirect* e-WOM → PA → PI	0.0142	0.0308			-0.0442	0.0768

* Number of bootstrap samples for percentile bootstrap confidence intervals: 5,000

DISCUSSION

The study highlights the importance of engagement, content, and creativity in shaping purchase intention. Engagement was found to foster trust and emotional connections, supporting Trivedi and Teichert's (2019) assertion that interactive and visually appealing content boosts consumer trust. The significance of clear, credible, and creative messaging was also reinforced, aligning with Wang et al. (2020), who emphasised the impact of authenticity and structured communication. Notably, while creativity typically enhances sensory appeal (Sriram et al., 2021), its negative effect in this study suggests that overly complex visuals may compromise clarity and trust, supporting Wardhani's (2022) cautionary view. These insights highlight the need for a balanced approach to strategic visual communication, integrating clarity, engagement, and creativity to effectively influence consumer decisions.

Loyalty, awareness, and credibility were identified as critical eWOM constructs driving purchase intention, collectively explaining a substantial variation in consumer behaviour. Loyalty's impact is consistent with Kim and Kim's (2022) assertion that sustained positive brand attitudes foster repeat purchases and advocacy. Similarly, awareness enhances brand visibility and recall, as noted by Yeo (2023), creating a favourable environment for purchase decisions. Credibility emerged as the most influential factor, aligning with Erdem and Swait's (2004) emphasis on trustworthiness as foundational to persuasive communication. These findings underscore the power of eWOM in shaping consumer perceptions and behaviours, particularly in digitally engaged demographics.

The study offers nuanced insights into the role of personal attractiveness. On one hand, it substantiates its mediating effect between visual communication and purchase intention, echoing Choi and Lee (2019) as well as Lou and Yuan (2019) who linked visually appealing content to enhanced consumer trust and emotional connection. Influencers perceived as attractive were shown to amplify brand credibility and purchase behaviour, consistent with Torres et al. (2019).

On the other hand, the hypothesised mediating role of personal attractiveness between eWOM and purchase intention was not supported. While eWOM significantly influenced personal attractiveness, the latter did not directly impact purchase intention. This divergence from prior research, such as Pinto and Paraminta (2021), suggests that in eWOM contexts, credibility and informational substance may outweigh physical appeal in driving consumer decisions.

These findings highlight the importance of context-specific strategies, such as leveraging engagement and content for visual communication or prioritising credibility in eWOM. Marketers should adopt a balanced and authentic approach, focusing on creating relatable, credible, and visually engaging content to resonate with target audiences. This study contributes to the literature by addressing gaps in digital marketing and provides valuable insights for optimising influencer marketing strategies. Additionally, it reinforces the Social Influence Theory by highlighting the role of physical attractiveness in influencing consumer purchase intention and advances theoretical understanding by demonstrating how digital engagement mechanisms like strategic visual communication and eWOM enhance persuasion and brand loyalty.

CONCLUSION

This study offers valuable contributions to the understanding of consumer behaviour, particularly in the context of strategic visual communication, electronic word-of-mouth (eWOM), and influencer marketing. The findings reaffirm and extend existing literature while providing actionable insights for academics and practitioners. The research identifies the pivotal role of engagement, content, and creativity in influencing consumer purchase intentions through strategic visual communication. Clear and credible messaging emerged as paramount, complementing creative elements to optimize consumer trust and recall. These insights highlight the importance of a balanced approach to visual communication, suggesting that future studies should explore the remaining variance in purchase behaviour by examining factors such as emotional resonance and demographic preferences. The study also validates the substantial impact of eWOM on purchase intention, driven by loyalty, awareness, and credibility. This finding emphasises the strategic significance of eWOM in digital marketing, particularly in culturally nuanced markets like Malaysia.

The results also suggest that marketers should prioritise building trust and loyalty through credible influencer partnerships while leveraging high-quality, relatable content to amplify brand awareness across digital platforms. The mediation analysis offered nuanced insights into the role of personal attractiveness. While strategic visual communication significantly influences purchase intention, its effect is amplified when mediated by personal attractiveness. This finding underscores the need for marketers to collaborate with visually appealing, authentic influencers who resonate with target audiences. However, the assumed mediating role of personal attractiveness in the eWOM-purchase intention pathway was not supported. This challenges prior assumptions and highlights the dominance of informational credibility in driving eWOM effectiveness. These results call for a contextualised approach, urging brands to prioritise trustworthiness and expertise over physical appeal in eWOM-driven campaigns.

From a practical perspective, this study emphasises a dual-focus strategy: optimising visual communication through engaging and credible content while aligning influencer characteristics with audience expectations. Furthermore, it urges marketers to craft strategic eWOM campaigns that resonate deeply with target demographics, leveraging trust, loyalty, and awareness to enhance purchase intentions. Theoretical implications include the advancement of knowledge on how visual and personal factors interact to shape consumer behaviour, providing a nuanced understanding of the varying roles of attractiveness and credibility across different marketing mechanisms. Future research

should explore additional mediators such as emotional engagement and perceived authenticity, along with cross-cultural and demographic variations, to refine these insights further.

Finally, this study reinforces the transformative potential of both strategic visual communication and eWOM in influencing consumer purchase intentions. It invites a re-evaluation of influencer marketing strategies, encouraging a focus on authenticity, credibility, and relevance to maximise impact in the digital marketplace. By addressing both theoretical gaps and practical challenges, the findings provide a robust foundation for future exploration and application.

This study's findings are limited to a specific demographic in Malaysia, restricting generalisability across different cultural contexts. Additionally, the reliance on a quantitative approach and focus on personal attractiveness as a mediator may overlook deeper consumer motivations and other influential factors. Future studies should explore additional mediators such as emotional engagement and authenticity while adopting cross-cultural and longitudinal approaches to enhance understanding. Investigating platform-specific influences, AI-generated influencers, and multi-platform collaborations can also provide further insights into evolving digital marketing strategies.

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Timing and initial crisis response strategy in Kanjuruhan's crisis and its impacts on public trust

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ABSTRACT

The study analyses the timing and characteristics of the Indonesian National Police (POLRI)'s initial crisis response after the Kanjuruhan Stadium incident in October 2022 and the effects of these measures on public trust. The study aims to assess the efficacy of POLRI's communication in the initial seven days of the crisis and to determine how strategic shifts, namely from defensive to conciliatory tactics, influenced public opinions. The study employed a descriptive qualitative methodology, incorporating content analysis of official statements and news reports along with document analysis of survey data and public documents. Thematic coding was used to classify POLRI's replies into defensive techniques (e.g., denial, rationalisation, blame-shifting) and accommodating methods (e.g., apologies, corrective measures, and expression of concern). The study's findings indicate that POLRI initially postponed communication and employed defensive tactics, including denial of accountability and ascribing blame to external elements such as stadium infrastructure and spectator conduct. In response to escalating media scrutiny and popular indignation, POLRI adopted conciliatory actions, including terminating personnel and public apologies. Nonetheless, these reactions were frequently technical and devoid of emotional impact, accompanied by apologies for neglecting to recognise critical actions—such as the use of tear gas—that led to casualties. The study illustrates that response time and contradictory messaging eroded public trust, consistent with Situational Crisis Communication Theory (SCCT) and Attribution Theory forecasts. This study theoretically enhances crisis communication literature by demonstrating how strategic inconsistencies and delayed empathy in high-fatality, state-managed disasters can exacerbate public blame and undermine institutional legitimacy.

Keywords: *Crisis communication, initial crisis response, Kanjuruhan tragedy, public trust, timing*

INTRODUCTION

Effective crisis management has become increasingly important as organisations face heightened scrutiny in a swiftly interconnected world, as it is crucial for maintaining public trust and institutional legitimacy. The timing of the initial crisis response is one of the most critical factors in this process. The initial reactions during the “golden hours,” which are the first 24 to 72 hours after a crisis, are crucial for shaping public opinion, mitigating reputational damage, and affecting long-term stakeholder relationships (Coombs & Holladay, 2014; Huang & DiStaso, 2020). The timing of an organisation's response is crucial in effectively managing crises, profoundly influencing public perception, business reputation, and stakeholder trust (Chan et al., 2020; Hardt, 2014).

Engaging stakeholders during a crisis is essential, as the organisation's response profoundly influences results. Abdullah and Ahmad (2021) argue that crisis communication managers play a crucial role during the initial phase of crisis management, which is often the most critical. Timely decision-making and speedy responses are essential for mitigating uncertainty and reputational harm, prioritising public safety information above reputational considerations (Ansell & Boin, 2019; Leonard et al., 2020; Stephens et al., 2005). Previous studies show that the timing and initial response to a crisis are crucial determinants of public perception and outcomes (Claeys & Cauberghe, 2012; Fleischer, 2013). For example, BP's sluggish reaction to the 2010 Deepwater Horizon oil leak, marked by indecision and protracted information sharing, intensified public indignation (Muralidharan et al., 2011). Likewise, the Japanese government's sluggish communication during the Fukushima accident exacerbated public fear and diminished trust (Perko, 2013).

Recent studies show that the promptness of activities during this period directly influences the efficacy of crisis communication, organisational credibility, and the pace of recovery (Yao et al., 2019; Yuan et al., 2021). Prompt responses that fit stakeholder expectations can substantially mitigate the adverse impacts of a crisis, thereby promoting trust and collaboration (Huang & DiStaso, 2020). For example, Jacinda Ardern's prompt and transparent response to the COVID-19 epidemic in New Zealand successfully mitigated health repercussions and fostered public trust (Wilson, 2020). These empirical studies underscore the significance of proactive timing and transparency in crisis management.

Although timing is broadly acknowledged as crucial in crisis management, studies that had been conducted predominantly concentrated on the methods employed rather than the timing of their application and its interaction with public expectations and the attribution of culpability. Consequently, it creates a void in the literature, especially for high-fatality and institutional crises involving state actors, when public trust is both tenuous and politically significant. This study aims to fill this gap by examining the timing and strategic framing of crisis responses issued by the Indonesian National Police (POLRI) in the aftermath of the Kanjuruhan Stadium disaster on October 1, 2022.

After a defeat, agitation ensued, leading to POLRI scattering onlookers and attacking those who tried to help. As police arrived, hundreds climbed over a six-meter barrier and fell onto the field. POLRI withdrew to the VIP area and employed tracking dogs to dissuade spectators. The stadium sustained considerable damage from tear gas deployed in the 12th stand, and smoke from the 14th stand triggered an alarm requiring evacuation. The disaster resulted in 134 deaths and roughly 650 injuries. POLRI faced

significant public criticism for its inadequate response to the problem, which had caused harm to several victims.

In order to frame this analysis, the study drew on two central theoretical frameworks: Situational Crisis Communication Theory (SCCT) and Attribution Theory. SCCT posits that the effectiveness of a crisis response depends on the alignment between public attribution of responsibility and the organisation's communication strategy (Coombs, 2013). The model recommends an accommodative strategy (e.g., apologies and corrective actions) in high-responsibility crises, such as intentional or preventable crises. Meanwhile, the Attribution Theory emphasises that delayed or defensive responses increase public perception of culpability, mainly when stakeholders believe the crisis was avoidable or mishandled (Weiner, 2012). Together, these theories underscore the crucial role of timing, tone, and message framing in managing public expectations and preserving legitimacy.

Despite its prominence in the national discourse, the Kanjuruhan case has not been sufficiently examined through the lens of crisis communication scholarship, specifically how the sequencing and content of POLRI's statements either mitigated or aggravated public distrust. The study asks explicitly:

1. To what extent was POLRI's initial crisis response timely, and what crisis response strategies did POLRI employ during the initial seven days of the Kanjuruhan tragedy?
2. How did the timing and the use of initial response strategies affect public trust in POLRI?

By analysing POLRI's early statements through qualitative content analysis, this study aims to significantly contribute to a more nuanced understanding of how timing and initial response strategy jointly influence institutional trust in high-stake public sector crises. This study's potential impact on crisis communication is substantial, offering new insights and perspectives.

LITERATURE REVIEW

Studies on crisis management underscore the strategies for handling crises and the importance of timing and initial response strategies in influencing public perception and trust. The Situational Communication Crisis Theory (SCCT) and Attribution Theory offer a framework for comprehending how organisations can adeptly manage stakeholder communication and attribution in times of crisis.

Situational communication crisis theory

Timothy W. Coombs formulated SCCT, emphasising the importance of prompt answers and accountability in crisis management (Coombs, 2004, 2007a, 2013). The theory provides a prescriptive framework for aligning crisis response techniques with the degree of public attribution of culpability. The idea categorises crises into three primary types: victim, accidental, and preventable (or deliberate), each linked to differing levels of organisational accountability. In high-stake situations involving negligence or purposeful injury, the theory advocates for accommodating tactics, including apology, corrective measures, and complete transparency.

Prior studies have validated SCCT's utility in diverse contexts, from corporate product recalls to public sector emergencies, confirming that response appropriateness and timing are key to mitigating reputational damage (Coombs & Holladay, 2014; Hardt, 2014; Hegner et al., 2016; Helfgott et al., 2016). The theory also highlights that early communication sets the narrative and influences whether stakeholders view the organisation as empathetic or evasive (Jaques, 2014; Veil et al., 2011). In addition, recent studies highlight the significance of SCCT in efficient and prompt crisis responses, which can profoundly influence the course and results of a crisis (Huang & DiStaso, 2020; Ndone & Park, 2022; Thakur & Hale, 2022; Yao et al., 2019; Yuan et al., 2021).

Despite its wide application, SCCT has been critiqued for several limitations. Firstly, the theory overemphasises reputation management. The theory prioritises protecting the image over addressing ethical obligations or victim needs (Coombs, 2015). However, stakeholders may expect moral accountability, not just strategic reputation repair, in real-life crises, particularly those involving human casualties. Secondly, SCCT is linear and prescriptive. The theory assumes crises unfold in predictable phases, and stakeholders' expectations can be easily categorised. It oversimplifies complex, evolving crises where public sentiment can shift rapidly (Frandsen & Johansen, 2011). Finally, the theory has limited attention to digital dynamics. The model does not fully account for the speed and virality of crisis narratives in social media, where misinformation can spread, and public expectations can change within minutes (Hong et al., 2023).

Attribution theory

Fritz Heider established the Attribution Theory in the 1950s. Bernard Weiner elaborated on it later, providing a framework for understanding how individuals identify the causes of events and behaviours, particularly in crisis scenarios (Weiner, 2012). In crises, the public assesses who is at fault based on perceived controllability and intent. If a crisis is seen as internally caused and preventable, the organisation is more likely to be blamed, triggering anger and reputational harm. Prior studies indicate that if the response is delayed, defensive, or vague, it increases perceptions of guilt and cover-up. For example, Coombs and Holladay (2004) emphasised the significance of early crisis responses in alleviating blame and reinstating public trust. Ulmer et al. (2010) asserted that delayed replies may result in heightened public scrutiny and blame, whereas effective communication can reallocate attribution from internal problems to external factors.

This theory is particularly relevant to the timing dimension of crisis response: the later a response is issued, the more likely the public will view the organisation as responsible, regardless of the facts (Weiner, 2018; Zheng & Cho, 2023). Recent research by Hong et al. (2023) indicates that organisations with swift and transparent responses during the COVID-19 epidemic encounter diminished unfavourable media coverage and public backlash. The Attribution Theory thus underscores the psychological mechanisms driving public reactions, helping explain why quick, transparent responses are essential for managing public sentiment.

While the Attribution Theory has significantly shaped crisis communication scholarship, the theory has several limitations. Firstly, neglect of cultural context. The theory assumes a universal attribution logic, but research shows that different cultures perceive blame, shame, and apology differently. In collectivist cultures like Indonesia, apologising can be seen as loss of face, and silence may be interpreted as caution rather

than guilt (Leung et al., 2011; Moehkardi, 1997). Secondly, it assumes rational judgment. The theory often assumes that stakeholders make rational cause-effect assessments, but emotions, media framing, and political biases distort public perceptions during crises (Bundy et al., 2016; Kim & Cameron, 2011). Thirdly, there is a static view of public sentiment. The theory does not account for how attributions can evolve, especially when new evidence or narratives emerge through media and social platforms.

In conclusion, SCCT and the Attribution Theory offer critical frameworks for examining organisational crisis management and public blame attribution. Researchers increasingly advocate for more adaptable, culturally attuned, and ethically based models as crisis contexts develop, particularly in politically sensitive, digitally mediated, and emotionally charged surroundings. This study enhances the ongoing discourse by applying these two ideas to a high-fatality, state-level crisis in Indonesia, emphasising how the timing and character of first responses influence public trust. The results provide empirical insights into POLRI's communication approach post-Kanjuruhan disaster and theoretical considerations regarding the applicability and limitations of SCCT and Attribution Theory in contemporary crisis communication.

RESEARCH METHODOLOGY

This study applied a descriptive qualitative research approach to analyse the timing and early response strategies of the Indonesian National Police (POLRI) during the Kanjuruhan Tragedy and their impact on public trust. Focusing on the period from October 1 to October 7, 2022, the study shows the early phase of crisis communication. The descriptive qualitative approach was selected as it enables researchers to analyse and interpret factual data and real-time discourse without necessitating theory development or extensive participant observation, which are more typical of grounded theory or case study methodologies (Busetto et al., 2020). Descriptive qualitative analysis is appropriate when the goal is to systematically delineate the progression of a phenomenon (in this instance, crisis response) over time based on textual data (Busetto et al., 2020). Hence, this method leverages abundant chronological textual data (e.g., official statements and media coverage), offering the necessary flexibility and analytical precision to delineate POLRI's communication strategies in reaction to public pressure.

This study executed the research in two stages: the initial step involved qualitative content analysis of official comments issued by POLRI at press conferences, utilising data from an Indonesian news outlet, Detik.com. The study derived the response strategy categories from Hong et al. (2023) and then revised them, as shown in Table 1. The study adhered to the procedures outlined by Hsieh and Shannon (2005), encompassing familiarisation, coding, categorisation, and interpretation.

Table 1. The operationalisation of crisis response strategy

Crisis response strategy		Operationalisation
Defensive Strategy	Denial	Statements that deny the occurrence or existence of the questionable event, or deny that person/organisation is the cause of the event
	Shifting the blame	Statements that claim that another party is responsible about the event

Table 1. (con't)

Crisis response strategy		Operationalisation
Accommodative Strategy	Excuse	Statements that provide reasons or excuses to try to eliminate blame from the public or as an effort to defend oneself from being blamed by the public.
	Justification	Statements that claim that the actor did not have the knowledge, ability, or control to avoid the event
	Minimisation	Statements that suggest that the act in the question is not as offensive as it seems
	Giving information	Statements that give latest information about what the person/organisation act, current situation and condition during the event
	Concern	Statements expressing concern and sharing in the sorrow over the incident that befell the victims
	Acknowledge	Statements that acknowledge that the person or the organisation made a mistake, as the cause of the crisis
	Bolstering	Statements that assure the positive attributes of an organisation to protect its stakeholders
	Corrective action	Statements that involve a commitment to repair the damage from the crisis event and/or attempts to restore the state of affairs
	Apology	Statements that agree that the event did occur and make an apology

The second phase involved a documentation study that carefully assessed existing records to extract pertinent information (Bowen, 2009; Busetto et al., 2020). As defined by Bowen (2009), documentation analysis involves reviewing existing documents to derive meaning, gain understanding, and develop empirical knowledge. This phase enriched the qualitative content analysis by supplying supplementary context. Documents were selected using purposive sampling to identify materials that directly pertain to the Kanjuruhan incident and its aftermath. The dataset included the Nasional Survey Report 2022 published by Lembaga Survey Indonesia (LSI) and mainstream online media news such as Detik.com.

The study examined and curated documents pertinent to the Kanjuruhan incident, organised essential information, and cross-referenced it with qualitative findings to ensure coherence. Documents were then cross-referenced with the coded statements from Phase One. This triangulation process allowed the researchers to verify the consistency of POLRI's messaging across different platforms, identify tone or strategy changes over time, and contextualise specific statements within broader public and institutional discourse. This dual-method strategy ensured a holistic understanding of the response sequence, its coherence, and the possible discrepancies that might influence public trust. The study applied methodological triangulation to enhance credibility and trustworthiness by combining content analysis with document analysis (Busetto et al., 2020).

RESULTS AND DISCUSSION

The timing aspect and initial response strategies during the Kanjuruhan tragedy

The qualitative content analysis results of the crisis response techniques employed by the Indonesian National Police (POLRI) during the six days following the Kanjuruhan Stadium riots indicate that POLRI utilised both Defensive and Accommodative techniques. Figure 1 illustrates the timeline and strategies employed by POLRI in responding to the Kanjuruhan tragedy situation.

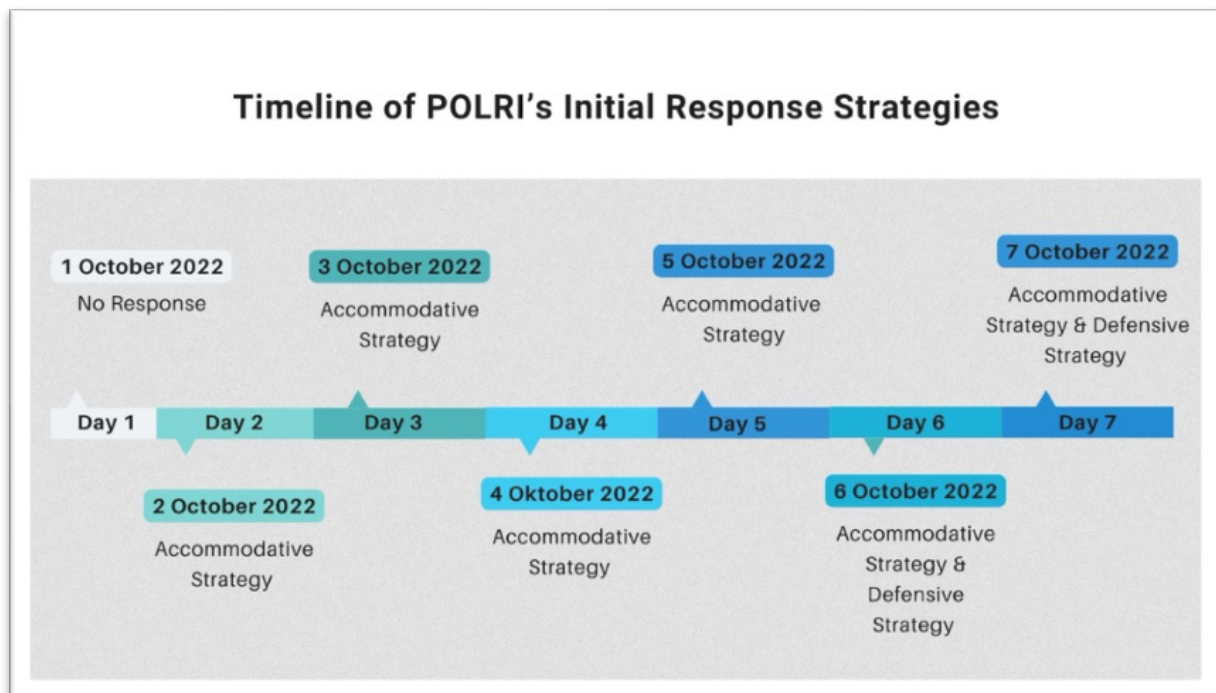


Figure 1. Timeline of POLRI's initial response strategies

Figure 1 illustrates POLRI's initial response strategies in the seven days following the incident, highlighting a shift from a lack of response to predominantly accommodative strategies, interspersed with occasional defensive actions. This visualisation illustrates the various components of POLRI's crisis management initiatives dynamically. This examination provides a detailed account based on the chronological framework.

On the first day following the Kanjuruhan tragedy, POLRI failed to respond by not releasing any public statement. This period of silence, while possibly suggests internal information gathering or coordination, created a vacuum of communication that allowed speculation and outrage to dominate public discourse. Delaying crisis response leads to increased attribution of blame and reduced public trust, as the public assumes that the organisation is hiding information or avoiding responsibility (Coombs & Holladay, 2014; Weiner, 2012). The initial silence may suggest a data collection or evaluation period before making a public announcement.

On the second day, POLRI utilised accommodative. The accommodative strategy emphasises giving information, corrective actions, and concern. The crisis response probably encompassed commitments to recognise and tackle issues.

Because of the great loss of our brothers and sisters who have passed away, we, along with the team, will conduct an investigation related to the organization and security processes. We will investigate the incident that occurred, which caused many casualties.

(Accommodative: Giving information and corrective actions, 2/10/2022)

Currently, the latest data from the Dinkes verification check shows a total of 125, previously 129.... we will take further steps with the DVI team and the investigative team for deeper investigation to thoroughly investigate, and later we will convey the results to the entire public.

(Accommodative: Giving information and corrective actions, 2/10/2022)

.....we express our deepest condolences for the passing of our brothers, friends, and supporters of Arema due to the incident that occurred last night after the series of events of the match between Persebaya and Arema.

(Accommodative: Concern, 2/10/2022)

POLRI highlighted corrective actions and information sharing to uphold its reputation and avert any implication of accountability for the casualties. It sought to prevent public allegations of being the principal instigator of the riots at Kanjuruhan Stadium, as this may lead to legal and political ramifications for the organisation, particularly considering the ongoing public examination of legal matters against POLRI. Thus, expressing concern, communicating the intention to commence an inquiry, and implementing the termination of POLRI members deemed responsible for the match's security may be the most appropriate crisis response strategy for POLRI.

According to the Attribution Theory (Weiner, 2012), when a crisis happens, the public inquiries about its reasons, underlying causes, accountability, and the measures taken to support the victims. Accurate and validated information about the issue and the measures taken to address it is essential for the public. The public necessitates facts rather than data derived from assumptions or premature conclusions. During the initial four days, POLRI provided inadequate or misleading information to the public seeking clarification on the causes of unexpected and adverse incidents during a crisis (Weiner, 2012). Law enforcement agencies should emphasise effective communication and transparency during the early stages of a crisis to mitigate public confusion and frustration (Thiessen & Ingenhoff, 2011; van der Meer et al., 2017).

Between Days 3 and 5, POLRI began adopting a more consistent accommodative strategy, emphasising apology, giving information, and corrective actions, such as dismissing police personnel and sharing investigative updates. This shift appears to have been influenced by growing media scrutiny, widespread protests, and pressure from political authorities, including the President.

Deactivating and simultaneously replacing the Malang Regency Police Chief. Deactivating the positions of 9 Brimob (Mobile Brigade) personnel....A team from the Bareksrim (Crime Investigation Unit) examiners for internal review by Itsus (Special Inspectorate) and Propam (Provost) is investigating the members directly involved in the security.

(Accommodative: Corrective actions, giving information, 3/10/2022)

I, as the Chief of Police of the Republic of Indonesia, also feel concerned, regretful, and simultaneously apologize for the shortcomings in the ongoing security process. The investigative team from Bareskrim (Crime Investigation Unit) and East Java Region Police are still working in a marathon, currently having questioned 29 witnesses.

(Accommodative: Apology, giving information, 4/10/2022)

There have already been 35 witnesses questioned, including internal police members involved in security activities during the match as well as external witnesses.

(Accommodative: Giving information, 5/10/2022)

The crisis response strategic realignment aligns with SCCT's recommendation that organisations should utilise accommodative strategies to restore trust in high-responsibility crises, such as intentional or preventable incidents (Coombs, 2007b; Coombs & Holladay, 2014). However, while structurally appropriate, the substance and tone of POLRI's statements during this phase remained technical and investigative, failing to communicate genuine empathy or moral accountability. Victims and supporters perceived this as insincere and insufficiently humanised (Bundy et al., 2016; Claeys & Cauberghe, 2012).

The Kanjuruhan catastrophe was a crisis resulting from organisational misbehaviour. Compensation and apologies can mitigate the adverse impact on the organisation's relationship with the public (Coombs, 2013; Coombs & Holladay, 2008). According to SCCT (2010), apologies can markedly diminish a crisis' perceived severity and alleviate stakeholders' negative emotions (Hearit & Roberson, 2020). Nevertheless, POLRI's apologies did not recognise the deployment of tear gas on the audience, a crucial aspect of the tragedy. Instead, it concentrated on procedural matters relevant to the investigation, exacerbating the alienation of victims and supporters of AREMA FC.

Apology is the most conciliatory strategy in crisis management, intended to convey accountability, foster forgiveness, and diminish animosity among those impacted (Coombs & Holladay, 2008). It can rebuild stakeholder confidence and support the organisation's crisis management efforts (Im et al., 2021; Li, 2017). Nonetheless, it can also create legal responsibilities and be viewed as confessions of guilt, particularly in the Indonesian society, where recognising mistakes can be seen as a loss of honour (Claeys & Opgenhaffen, 2021; Leung et al., 2011; Moehkardi, 1997). Nonetheless, POLRI's apologies failed to acknowledge the use of tear gas against the audience, a significant element of the tragedy. Instead, it concentrated on procedural issues pertinent to the investigation, further estranging the families of victims and supporters of AREMA FC, who viewed POLRI as disingenuous and opaque (Bundy et al., 2016; Coombs, 2007b). POLRI's hesitance to convey contrition for its acts may have arisen from a need to preserve its authority and reputation as a law enforcement entity. However, this hesitance might impede efficient crisis management since the public perception of insincerity may aggravate the situation.

Numerous organisations may hesitate to apply this method during a crisis thoroughly, and apprehensions over insincerity may emerge. During public distress, grief, fury, and chaos, folks may view an apology as a mere token, betrayal, or a strategy to alleviate outrage. Consequently, meticulous regulation of the scheduling and dissemination

of communications is essential to prevent misinterpretations (Claeys & Cauberghe, 2012; Frandsen & Johansen, 2011; Jugl, 2022).

Organisations must comprehend the implementation of the apologetic method in crisis management, especially regarding timing. Proactive apologies are more efficacious than reactive ones, denoting honesty and integrity (Hearit, 2022; Hearit & Roberson, 2020). In legal circumstances, an apology can be viewed as an ethical stance and an expression of accountability; hence, offering an apology can restore confidence without substantial legal repercussions (Claeys & Opgenhaffen, 2021).

Organisations must avert disaster in crises with several casualties, guarantee people's accountability, and offer compensation and assistance to victims and their relatives (Benoit, 2018; Kiambi & Shafer, 2016). However, from October 2 – 5, 2022, POLRI did not issue a formal statement regarding support for victims and their families, resulting in negative sentiments, including disappointment and hatred towards the organisation (Weiner, 2018; Zheng & Cho, 2023).

In the final two days, POLRI incorporated accommodative and defensive approaches in its initial crisis response strategy. POLRI's statements became increasingly contradictory, combining ongoing accommodative actions (e.g., naming suspects) with defensive elements, such as justifying tear gas use, blaming spectators and the organising committee, and shifting accountability to stadium conditions and internal officers. This combination reflects a conflict between institutional self-preservation and emerging external pressure from media, civil society, and victim groups.

...we will thoroughly complete the investigation we are currently conducting, especially regarding those handled by the investigators.

(Accommodative: Giving information, 6/10/2022)

The person concerned was aware of FIFA's regulations regarding the prohibition of tear gas use but did not prevent or prohibit the use of tear gas during security operations. They did not check the completeness of the equipment brought by the personnel. At the end of the match, reactions from supporters or spectators regarding the outcome emerged. Of course, this then caused the spectators, especially those in the stands where the shots were fired, to panic, feel pain, and then try to leave the arena immediately... Ideally, 5 minutes before the match ends, all those gates should be opened. Then, there is a horizontal bar about 5 cm high that can obstruct spectators or supporters when they have to pass through those gates, especially if a large number of spectators are passing through. The number of spectators entering the field increased, and at that moment, some members began to use force, as we saw some using shields, including when securing the Arema FC goalkeeper.

(Defensive: Denial and shifting the blame, 6/10/2022)

So, some shots are not just tearing gas. There are two types of smoke, that's just the term smoke, only the sound and smoke come out. There is another tear gas shot outside (the stadium) is the same. The SOP is like that when controlling the anarchist crowd.

(Defensive and accommodative: Denial, acknowledge, and shifting the blame, 7/10/2022)

Inside, members of POLRI fired tear gas, yes, in order to disperse, then disperse the masses, who had committed anarchic acts. There are a lot of videos circulating, right? They have done destruction, arson, and so on.

(Defensive and accommodative: Acknowledge, excuse and shifting the blame, 7/10/2022)

The three witnesses examined... There were two crime scenes in the incident. The first is related to Article 359 or 360 inside. Inside, members of POLRI fired tear gas in order to disperse.... it is currently determined that there are six suspects.

(Accommodative: Giving information, 7/10/2022)

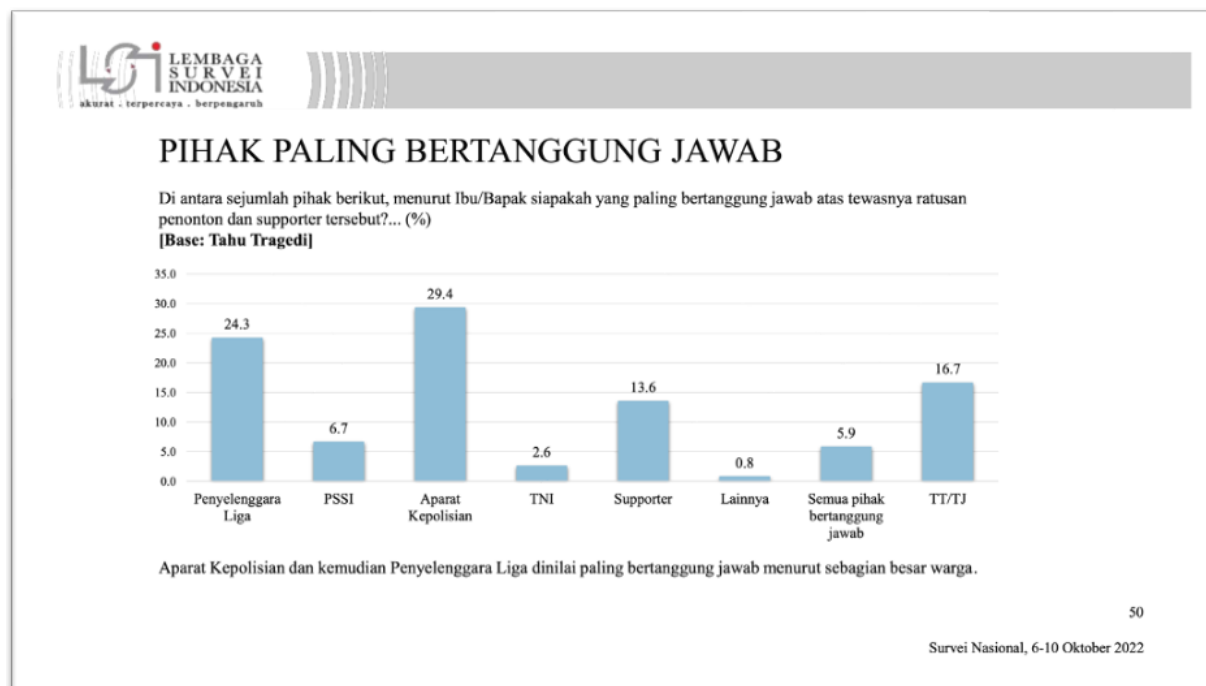
This oscillation between strategies eroded the coherence of POLRI's communication, resulting in a public perception of inconsistency and evasiveness. According to SCCT, such inconsistent strategy responses in high-responsibility crises can intensify reputational damage (Coombs, 2007). The prominent press conference on Day 7 was anticipated to address institutional accountability; nevertheless, POLRI reaffirmed procedural justifications and attributed blame to external circumstances. This overlooked the opportunity where open and human-centric crisis communication could have been emphasised. The amalgamation of defensive measures with accommodative strategies indicates a reaction to external demands while upholding accountability (Thakur & Hale, 2022; Zhou & Ki, 2018). This combination illustrates a continuous assessment of the balance between acknowledging responsibility and protecting oneself from the possible escalation of blame or further adverse consequences (Park, 2017). The observed pattern indicates that POLRI's crisis management strategy adopted a reactive and hybrid approach but transitioned to emphasise accountability and proactive actions in crisis resolution. This underscores the necessity for a balanced strategy in crisis management.

The SCCT and Attribution Theory suggest that organisations should only implement defensive methods when they hold minimal accountability for a disaster (Coombs, 2007a, 2013). In the case of POLRI, the organisation's defensive strategy may have been counterproductive, leading to increased scrutiny and condemnation from the public and media. It can harm an organisation's reputation and complicate recovery efforts (Kim & Cameron, 2011). However, POLRI's defensive strategy allowed time for fact-gathering and a comprehensive response plan, preventing hasty conclusions and ensuring a thorough investigation.

The Kanjuruhan disaster highlighted the organisation's accountability and culpability, resulting in a deterioration of trust between the institution and its stakeholders. The public may perceive POLRI as evasive or deceitful, making rehabilitating difficult. The combination of accommodating and defensive techniques can effectively mitigate a crisis and restore trust. However, the twin methods used by POLRI during the Kanjuruhan incident did not effectively communicate clear goals or organisational accountability. Hence, this erratic response could lead the public to perceive POLRI as an insincere entity, lacking trustworthiness as a protector and guardian of the populace.

The effects of the timing and initial crisis response strategy employed on public trust

The initial response to a crisis is critical in influencing public perception and establishing the trust an organisation can uphold or regain. Failure to account for timing and public interest may have considerable detrimental effects on public trust. Further, frequent inadequate or delayed responses intensify the crisis, implying that the organisation lacks competence, demonstrates indifference, or seeks to avoid accountability. The analysis of documents reveals that dissatisfaction with crisis management in handling the Kanjuruhan tragedy had a detrimental effect on POLRI.



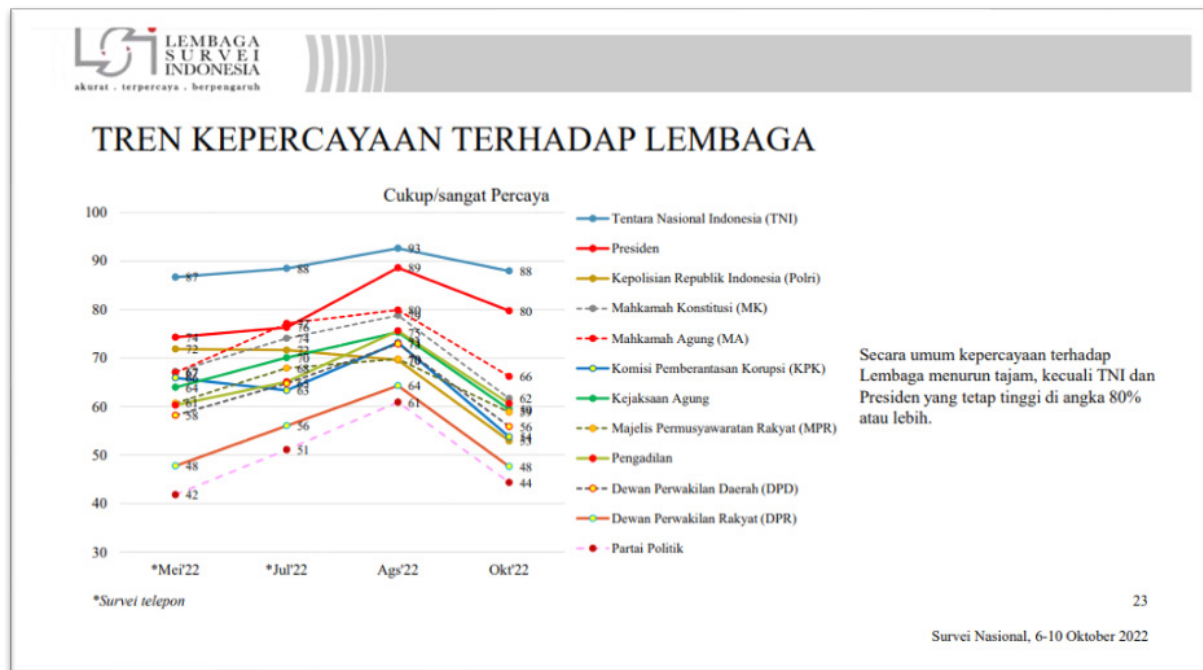
Source: Lembaga Survei Indonesia, 2022

Figure 2. LSI's survey result: The most responsible party

On October 20, 2022, LSI released a survey report on public confidence in Indonesian law enforcement agencies and perceptions of the Kanjuruhan issue. From October 6 to October 10, 2022, LSI conducted a nationwide poll with 1,212 respondents from 34 provinces. As shown in Figure 2, the survey confirmed that most Indonesians held POLRI accountable for the tragedy. According to the study, 80% cited the use of tear gas as the primary cause of fatalities, while over 50% rejected POLRI's justification that supporters were anarchic (Lembaga Survei Indonesia [LSI], 2022). This survey results align with the Attribution Theory, which posits that when the public perceives a crisis as avoidable, any delay or defensiveness increases blame attribution, regardless of legal findings (Weiner, 2018; Zheng & Cho, 2023).

Notwithstanding favourable public view of POLRI's remedial actions, including officer terminations and suspect identifications, LSI indicated that awareness of the Kanjuruhan incident has adversely affected trust in POLRI (LSI, 2022). Figure 3 shows that trust in POLRI fell dramatically from 78% in August 2022 to 53% in October 2022.

The Kanjuruhan tragedy is a key turning point, mainly due to the delayed expression of empathy or apology, the perceived lack of transparency, and the overemphasis on technical and procedural justifications. While POLRI did take corrective steps, such as dismissing officers and naming suspects, these actions were not paired with a strong moral narrative of accountability and care for victims. As SCCT emphasises, actions without effective communication are often perceived as insufficient in high-fatality crises (Coombs, 2015).



Source: Lembaga Survei Indonesia, 2022

Figure 3. LSI's survey result: Trend of trust towards Indonesian institutions

Even though POLRI has guidelines or protocols for handling mass disorder situations, the crisis management of the Kanjuruhan issue by POLRI has resulted in a deterioration of public trust. The organisation prioritised the investigative process and personnel terminations over providing a public apology or naming individuals accountable. This tactic may have intensified public perceptions of incompetence and indifference. In addition, POLRI only used press conferences as the only means to communicate the Kanjuruhan crisis response strategy. The omission of an apology, emphasis on procedural specifics, and limited communication tools indicate a deficiency of empathy for victims and their families and a lack of accountability for the crisis (Claeys & Cauberghe, 2012; Huang & DiStaso, 2020; Yao et al., 2019). POLRI's inability to explicitly acknowledge its role in the incident and its rationale for its actions did not meet public expectations for accountability. As a result, organisations that exhibit transparency and accountability for their errors are more likely to garner public trust.

CONCLUSION

The study underscores the significance of prompt crisis interventions and timing techniques in fostering public trust. The analysis demonstrates that POLRI's early reaction to the

Kanjuruhan tragedy was inadequate, resulting in answers that were both inconsistent and lacking in empathy. This poor and reactive crisis management method may have worsened public impressions of POLRI, resulting in reputational damage and public unrest. Thus, effective crisis management necessitates timely communication, accountability, and transparency to mitigate the crisis' adverse effects and restore public trust.

The study underlines the relevance of SCCT and Attribution Theory, illustrating how delayed and defensive actions can intensify blame attribution and damage reputation. Utilising conciliatory techniques, such as immediate apologies and remedial actions, is essential for reinstating confidence, particularly in significant organisational failures. Organisations confronting purposeful crises should have comprehensive crisis management policies, prioritising timeliness, empathy, and responsibility in the early reaction phase. Empathy and authentic openness are crucial for humanising institutions and fulfilling public expectations, especially during crises involving fatalities. We recommend minimising blame-shifting or denial to avoid escalating public scepticism and harming our reputation.

Finally, the study's reliance on qualitative content analysis of publicly available papers and media stories limits its scope. It may not fully capture the complexities of the internal decision-making process. Future research should investigate the long-term effects of crisis response strategies on institutional trust and reputation, conduct comparative analyses, and prioritise stakeholders' perspectives. The study also advocates using digital gadgets and social media to facilitate real-time communication and control public attitudes.

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Facebook brand page as a relationship management tool

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ABSTRACT

Public relations practitioners and social media professionals have shifted to building customer relationships through social media. A recent study mentioned that PR practitioners should adopt social media as a relationship management tool, yet academic research addressing this remains limited. Apart from the academic research gap, practical problems were identified, where recent research found that practitioners need to understand how to effectively and strategically communicate via social media. Additionally, the geographical research gap in public relations studies in Bangladesh is getting limited attention. To address these gaps, this study used the organisational public relationship maintenance theory to conceptualise social media (Facebook) brand page engagement to understand further how relationships with key public members on Facebook can be maintained. Based on 12 in-depth interviews with Bangladeshi university students, the study found that a relational approach can create significant engagement on Facebook brand pages. The results demonstrate that a relational approach to communication could create social media brand engagement, which will be helpful for practitioners in building sustainable relationships. The study also discusses potential findings, limitations, and future research directions.

Keywords: **Public relations, social media, relationship maintenance strategy, Facebook, brand page**

INTRODUCTION

Today, most organisations communicate with consumers via social media channels (Gómez et al., 2019; So et al., 2014). Thus, social media may affect how consumers receive and engage with organisations' content. Moreover, marketing and public relations have become more integrated due to social media (Sutherland et al., 2020). Instead of focusing on transactional approaches, public relations professionals build consumer relationships (Gómez et al., 2019; Pansari & Kumar, 2017). Public Relations (PR) practitioners have now shifted to building customer relationships to ensure satisfaction and loyalty rather than maintaining a transaction-based strategy (Gómez et al., 2019; Pansari & Kumar, 2017).

Recent research highlights the necessity for PR to adopt social media as a relationship management tool, notably for customer service and stakeholder engagement (Namisango & Kang, 2019; Sutherland et al., 2020). Social media brand pages can handle stakeholder concerns and humanise interactions, as well as enhance satisfaction and engagement to foster customer care (Freberg & Kim, 2020). However, studies by Freberg and Kim (2020) as well as Sutherland et al. (2020) lack the conceptual clarity on humanising interactions and interactivity in social media brand engagement. Moreover, it remains unclear how humanised interactions can enhance engagement and satisfaction. Past studies suggest that the organisational public relationship maintenance theory (Hon & Grunig, 1999; Kelleher & Miller, 2006; Li, 2015) can be a viable theory for this research. Social media gives businesses more opportunities to interact with their customers and replacing the formal, traditional communication styles (conversational tone) of corporate websites with a more informal, humanised tone (Kulkarni, 2019; Men & Tsai, 2012), can be a solution.

Besides, this theory's components, like conversational human voice, relational commitment, responsiveness, and positivity (Kelleher & Miller, 2006), can improve Facebook brand page engagement, encourage sustainable relationships and address research gaps. Moreover, well-maintained social media pages/platforms of organisations and active user involvement help build relationships organically between organisations and stakeholders through interactions like comments, queries, support, and recommendations (Men & Tsai, 2014). In this way, this research considers social media (Facebook brand page) as a relationship management tool.

This research attempts to fill the above-mentioned gaps and explore how a relational approach can enhance social media brand engagement for relationship building. Understanding which relational approaches can enhance social media brand engagement helps practitioners understand the strategic use of social media as a relationship management tool.

LITERATURE REVIEW

Organisational public relationship maintenance theory and social media brand engagement

Relationship maintenance methods and relational outcomes through online communications was explored by Kelleher and Miller (2006). Kelleher and Miller (2006) used the relationship management scale from Hon and Grunig's (1999) study to develop

measures of relationship maintenance strategy. They then used their expanded scale to compare public perceptions of a company's blogs to its traditional public relations communication (Hon & Grunig, 1999; Kelleher & Miller, 2006; Sweetser, 2010; Sweetser & Kelleher, 2016). This study adopted the relational maintenance strategies by Kelleher and Miller's (2006) study, which is also known as the organisational public relationship maintenance theory (Hon & Grunig, 1999; Kelleher & Miller, 2006; Li, 2015).

Public relations academics have studied relationship maintenance strategies in a variety of online contexts, including blogs (Kelleher & Miller, 2006), websites (Ki & Hon, 2006), and social media (Facebook and Twitter) (Dhanesh & Duthler, 2019; Men & Tsai, 2012; Men & Tsai, 2015; Painter, 2015; Sisson, 2017). Nonetheless, from the above references, the use of the relationship maintenance strategy for social media brand engagement (particularly Facebook brand pages) did not get much attention in the public relations literature. Furthermore, even though cultural variations might result in various message designs across audiences, very little of the earlier research looked at relational strategies outside of a Western setting, such as Asian social media contexts (Cucchi, 2019; Huang et al., 2023). This research also wants to examine whether contexts in non-Western countries create any differences in social media brand engagement. Table 1 shows past research on relationship maintenance strategies and social media in public relations literature.

Table 1. Relationship maintenance strategies and social media-related research

Author(s)	Title	Topic	Method	Theory	Findings	Antecedents	Consequence	Platform	Country
Men & Tsai (2014)	Perceptual, attitudinal, and behavioral outcomes of organization–public engagement on corporate social networking sites	Public engagement	Survey	Organisational public relationship	Findings underscore the importance of public engagement via social media on enhancing perceived corporate transparency and authenticity, and thereby cultivating strong relationships.	Public engagement	OPR/ Public advocacy	Facebook	USA
Water et al. (2009)	Engaging stakeholders through social networking: How nonprofit organizations are using Facebook	Stakeholder engagement	Content analysis	Relationship cultivation	Results indicate that nonprofit organization incorporated disclosure, information dissemination, and involvement revealed that disclosure was the most often used strategy. Though components of dissemination and involvement were used differently by the nonprofit subsectors, overall they were largely ignored by the organizations.	No	No	Facebook	

Table 1. (con't)

Author(s)	Title	Topic	Method	Theory	Findings	Antecedents	Consequence	Platform	Country
Men & Tsai (2012)	How companies cultivate relationships with the publics on social network sites: Evidence from China and the United States	Relationship cultivation	Content analysis	Relationship cultivation strategies/ Uses & gratification	Results indicate that companies in both countries (USA, China) employed disclosure, information dissemination, and interactivity and involvement), but the specific tactics vary across the two markets	No	No	Facebook /Renren	USA/ China
Liu et al. (2020)	Developing a multi-level organization-public dialogic communication framework to assess social media-mediated disaster communication and engagement outcomes	Public engagement	Content analysis	Organisational public dialogic communication	The study develops a multi-level framework to assess the dialogic communication level of social media messages.	Media richness, correcting, and confirming message topics	Social media public engagement	Facebook	USA
Dhanesh & Duthler (2019)	Relationship management through social media influencers: Effects of followers' awareness of paid endorsement	Social media influencer	Survey	Organization–Public relationships	Study found that awareness of paid endorsement relates to ad recognition, which is correlated with purchase and eWOM intentions. Study also found that awareness of paid endorsement is correlated with influencer-follower relationship, which is associated with purchase and eWOM intentions	No	No	Facebook /Twitter	UAE
Tsai & Men (2018)	Social messengers as the new frontier of organization-public engagement: A WeChat study	Organisation -Public engagement	Survey	Organization–Public relationships	Publics' social messenger dependency and privacy perception of the medium are found to effectively drive public engagement, which in turn enhances organization-public relationships.	Social media dependency/ Privacy concern/ Perceived social media messengers	Public organisation and engagement / OPR	Wechat	China

Table 1. (con't)

Author(s)	Title	Topic	Method	Theory	Findings	Antecedents	Consequence	Platform	Country
Huang et al. (2021)	Relationship cultivation and public engagement via social media during the COVID-19 pandemic in China	Relationship cultivation	Content analysis	Relationship cultivation strategies	Results showed that both relationship cultivation strategies and disaster social media use effectively increased engagement between Chinese companies and their publics, although on different levels.	No	No	Weibo	China
Saffer et al. (2013)	The effects of organizational Twitter interactivity on organization–public relationships	Interactivity	Survey	Organization–Public relationships	Findings suggest that an organization’s level of Twitter interactivity influences relationship quality.	No	No	Twitter	USA
Painter (2015)	Online political public relations and trust: Source and interactivity effects in the 2012 U.S. presidential campaign	Political PR	Experimental design	Organisation–Public relationship	The results indicate Facebook is differentially more effective than campaign websites at building both citizens’ relationships with the campaigns and trust in government, especially among users who engage in expressive behaviors triggering higher levels of elaboration and self-awareness	No	No	Facebook	USA
Men & Tsai (2015)	Infusing social media with humanity: Corporate character, public engagement, and relational outcomes	Public engagement	Survey	Organisation–Public relationship	The results underscore the effectiveness of a personification approach in social media communication to construct an agreeable corporate character for enhancing public engagement and organization–public relationships.	Public engagement/ Corporate characters / Parasocial interaction/ Community identification	OPR	Facebook	USA

Table 1. (con't)

Author(s)	Title	Topic	Method	Theory	Findings	Antecedents	Consequence	Platform	Country
Sisson (2017)	Control mutuality, social media, and organization-public relationships: A study of local animal welfare organizations' donors	Relationship management	Survey	Organization-Public Relationships	This study examined the role of control mutuality in social media engagement to provide insight for social media strategy creation for non-profit organizations	No	No	Facebook	USA

Studies that were previously conducted reveal that adopting a conversational tone for corporate social media posts increases engagement and favourable outcomes (Sung & Kim, 2014; Vernuccio, 2014). Moreover, a recent study also reveals that organisations should be more open and ensure their privacy by creating engagement through social media brand pages (Freberg & Kim, 2020). Additionally, organisations should initiate organisation-to-customer interaction responsiveness, which captures how engaged customers are with materials shared on social media by an organisation (Lin et al., 2018; Yang et al., 2016). It seems that employing a relational maintenance strategy affects social media engagement. Hence, based on previous literature, this strategy did not conceptualise a particular social media (Facebook) brand page. So, the following research question was formulated:

RQ. How do relational maintenance strategies impact consumer engagement on Facebook brand pages?

METHODOLOGY

This study utilised qualitative face-to-face semi-structured interviews with 12 private university students in Dhaka, Bangladesh. Participants, appointed via purposive sampling, had previous experience engaging with Bangladeshi Facebook brand pages. The interview participants were university students from Dhaka because Dhaka ranks second in active Facebook users globally, and young people (18–34) are the most active users, given the rapid growth of social media in Bangladesh (Ahmed et al., 2021; Hoque et al., 2020; Khalid & Chowdhury, 2018; Serafin, 2018; Storie, 2017). The interviews, lasting 30–45 minutes, explored constructs like relationship maintenance strategies. The interviewer provided the definitions of each construct and asked 3–4 questions to participants, such as, “Have you ever witnessed any of those activities provided in the definitions of the constructs?” The interviewer also asked how much the relationship maintenance strategy helped them engage with social media (e.g., Facebook) brand pages.

After all the interviews were conducted and transcribed, the researcher began looking for recurring themes, in order to begin manual and computer-assisted coding of the transcriptions. The researcher read the transcriptions numerous times, and then underlined in yellow, the portions she believed would be useful, and in green, the passages she thought would be the most beneficial. Themes began to emerge as the researcher collected relevant quotes for the analysis. The researcher used copy and paste to transfer these findings into a new document so that she could compile a list of the topics and make a copy of the participant information for each topic. This provided the researcher the flexibility to analyse the information related to each code and modify words based on the suggestions made by participants while the procedure was ongoing. A summary of the research methodology is given in Figure 1.

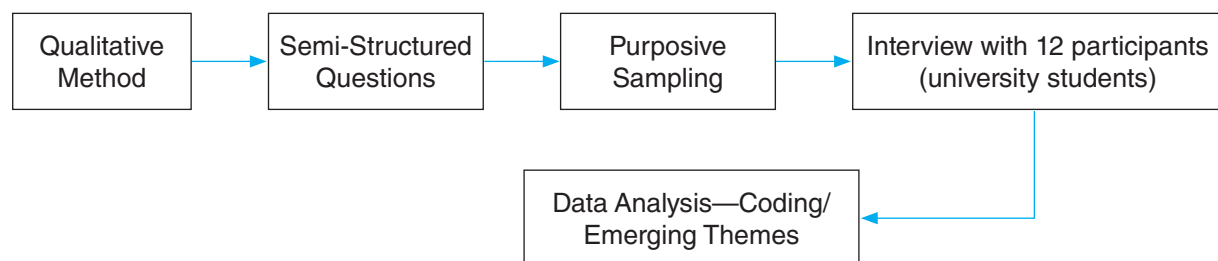


Figure 1. Summary of the research methodology

FINDINGS

Relational maintenance strategy and Facebook brand page engagement

The findings highlight a dominant trend for informal, friendly, and humanistic interactions on Facebook pages in Bangladesh. A key emerging theme is that communication styles that imitate natural human conversations rather than traditional corporate communications in Facebook brand pages create a sense of warmth, genuineness, and relatability, which drives more engagement. Moreover, authenticity and expertise were critical factors that participants appreciated while a casual, helpful tone was maintained when products were demonstrated on Facebook brand pages. For example, one participant stated that:

When I visited their Facebook brand page, the page was very welcoming, and the page also mentioned that if you are stuck or have any difficulties, you can send us a message. I also take screenshots and get replies within a second. Moreover, the contents and captions of the pages are more informal. These are why I was engaged with that Facebook brand page.

Regardless, another participant also mentioned that the lack of brand transparency leads to a negative effect, discouraging participants from engaging with a brand on Facebook. For example, Participant 4 shared that he has had a bad experience with a brand page. He had visited that particular brand page, but they did not show the hidden charges of their products, such as delivery charges and other charges. That discouraged him from engaging further with that brand page.

Another key theme that emerged was that participants cherished brand pages that used humour, informal language, and personalised responses. Such approaches from brand pages foster stronger emotional connections. These themes align with the conversational human voice, where brands that communicate less corporately and more like people are perceived as more approachable. Further, generational aspects of engagement on social media mattered as well. Gen Z prefers brands that adopt their linguistic style and present an environment that feels fun and engaging, rather than purely transactional. One participant stated that:

There are different kinds of brands and industries in Bangladesh. You will find that in certain industries, Facebook brand pages have a more conversational approach, and the rate of interactions is high. Due to this element of warmth, we also feel obliged to be more polite in our responses and ask for information in a positive and friendly manner. On the other hand, we also have many brands catering to Gen-Z. Those brands conversationally speak in fluid Gen-Z linguistics, making Gen-Z feel more relaxed, as if they are talking to a friend. So, these brands develop personalities, and we want to have fun with them and not just have informational conversations with them. It varies from brand to brand. The brand pages that use more conversational and warm language and speak in our (Gen-Z) language or how we speak it easier to communicate with those brands to engage.

The participant's feedback suggests that humanising the brand voice can be a competitive advantage in brand digital communications, strengthening customer relationships and loyalty. The findings highlight that genuineness and transparency are important for encouraging consumer trust and long-term engagement with Facebook brand pages. Participants appreciated brand pages that openly communicated product authenticity, such as showcasing raw materials or incorporating QR codes for verification. One participant shared:

The brand page showed that their products are authentic and their price is higher, and if you do not think it is authentic, you can check through a QR code scan. This is how brand pages communicate relational commitment through the openness and authenticity of their products and services.

This aligns with communicated relational commitment, where brands vigorously exhibit honesty and openness to acquire more substantial relationships with the customer. When brands proactively communicate facts about their products and pricing, buyers are likelier to engage, trust, and build loyalty towards them. Another key theme is the interplay between brand authenticity and consumer loyalty. Participants admitted they would remain loyal and committed if they had transparent and positive experiences with brands on Facebook. One participant highlighted:

I had a bad experience with a brand page. I visited a brand page, but they did not show the hidden charges of their products, such as delivery charges and other charges. That made me not engage with those brand pages. Hence, when I visited other pages where brand pages were authentic and transparent, I became loyal to those brand pages.

The above quote implies that brand communication openness strengthens emotional and behavioural loyalty, while misleading practices corrupt trust, driving consumers toward more credible competitors on social media. This presents an essential significance for brands: maintaining authenticity is not just about short-term engagement but cultivating a long-term, trust-based relationship with their audience.

Responsiveness is also another primary concern for the Bangladeshi consumer. The findings emphasise the key role of responsiveness in Facebook brand page engagement in Bangladesh. This theme suggests that punctual responses build a sense of attentiveness and reliability, directly influencing purchasing decisions and brand loyalty. Participants expressed frustration with delayed responses, indicating that slow communication can lead to disengagement and a shift towards more responsive competitors. This highlights the growing consumer expectation for instant interaction in the digital space, where brands that fail to provide prompt replies, risk losing potential customers. One participant explained that:

Some brand pages respond so quickly. On the other hand, some brand pages respond very slowly, and it takes 2 or 3 days to respond to their customer's queries. When those brand pages provided a quick response, I became more interested in buying products and services from them and felt more engaged with them.

The majority of participants noted that many brand pages in Bangladesh are taking initiatives to show their positivity to their subscribers. The findings highlight the central role of positivity in brand communication on Facebook, indicating that a hopeful and approachable tone encourages more heightened engagement. However, a deeper interpretation implies that this engagement concerns positivity, personalisation, and bold customer service. Participants appreciated cheerful, modest interactions, and a new theme emerged, suggesting that relevant products cater to their needs. This implies a more comprehensive theme of perceived mutuality, where customers feel appreciated when brands focus more on responding optimistically. This optimistic response also strengthens loyalty and interaction. One participant shared:

Whenever I need any suggestions regarding their products, brand pages always provide them positively and optimistically, and whenever I buy any products that are not in stock, brand pages always suggest that I can buy those stock-out products when those products become available, which makes me more engaged with those brands.

Moreover, the distinction between positive and unfavourable brand communication signifies that personality and conversational humanisation are essential to brand engagement. Participants correlated brand interactions with essential human social manners, suggesting that brands that imitate sociable, engaging interpersonal dynamics will thrive more in cultivating long-term relationships. The emerging theme of passionate association through digital conversations also means that brands must go beyond product advertising to formulate noteworthy, trust-based relations that stimulate resumed engagement. One participant highlighted:

This is like basic human interaction. You would not go to the individual who is not open-minded or close-minded; you would go to the person who is open, cheerful, and funny in the room. It's a primary human interaction. Yes, I would go to a better approachable individual than a decisive person. I do not have any experience, but if brand pages employ more enjoyment and positive communication, I will go to those brand pages.

Participants believed providing suggestions, warnings, and solutions to customer queries in a timely manner is something that brand pages owe their customers. Moreover, after these favourable responses, customers not only become engaged but will also share the brand's good services with others, which refers to electronic word-of-mouth (eWOM). One participant commented that:

The skincare brand page always gives me whatever I need regarding suggestions, precautions, and other things, which I think are in line with their tasks and responsibilities.

The frequent focus on task completion suggests that engagement is a by-product of interaction and an outcome of brands revealing their responsibility and customer-centric manners. Additionally, after-sales support is a key aspect in maintaining engagement, demonstrating that customer relationships grow beyond the point of purchase. This highlights the evolving anticipation that brand pages express effectively and carry customer concerns, strengthening digital brand presence. Another participant shared:

I ordered a product from a certain brand page but faced a usability issue. However, brand pages send tutorial videos to me that are already posted on their pages. That showed that brand pages are more responsible in fulfilling their tasks.

DISCUSSION

In reference to the research question, which asked, “ How do relational maintenance strategies impact consumer engagement on Facebook brand pages?, the study's preliminary objective was to determine if there is a beneficial impact on Facebook brand page engagement by employing the relational maintenance strategy components. The reason is to manage social media (Facebook) as a more complete relationship management tool,

which academic researchers have yet to address (Namisango & Kang, 2019; Sutherland et al., 2020).

In the past, the direct association between relational maintenance strategy and social media brand engagement received scant attention in public relations literature. For example, conversational human voice is part of the relationship management studies, which however, did not study the direct relationship between social media brand engagement in past analyses (Chen et al., 2021; Dijkmans et al., 2015; Javornik et al., 2020; Kelleher, 2009; Men et al., 2018; Men et al., 2022; Men & Tsai, 2015; Purani & Jeesha, 2023; Schamari & Schaefer, 2015; Sparks et al., 2016). Only one study concentrated on conversational human voice, a function of interpersonal communication that engages people on different social media platforms (WeChat) (Men, 2022).

Communicated relational commitment represents a very small concentration in public relations literature. Previous analyses regarding relational maintenance strategies contradicted Sweetser and Metzgar's (2007) findings, and the research context differed. However, this study's findings align with previous study's findings. The consequences of the previous study suggest that communicated relational commitment is essential for engaging stakeholders to build relationships (Browning & Sweetser, 2020). Further, Sweetser and Tedesco's (2014) study revealed that strong relational commitment can build stronger relationships with respective stakeholder groups (Sweetser & Tedesco, 2014).

Regarding responsiveness, previous studies reveal that businesses and non-profit associations often do not respond to emails from external stakeholders (Avidar, 2013; Harrison-Walker, 2001; Kent et al., 2003; Taylor et al., 2001). The lack of response can be categorised as either an absence of responsiveness or a delayed, incomplete, or unhelpful response. This research presents mixed results, with organisation-initiated responses having Facebook brand page engagement but not significant. This is because participants in the interview stated that many organisational Facebook pages did not respond in time, which explains their lack of engagement with those brand pages. Positivity/Optimism is another dimension of the relational maintenance strategy, which suggests that organisations use a positive tone to strengthen their relationships with consumers and brands (Kelleher, 2009). In this research, the qualitative results positively affected Facebook brand page engagement. Task sharing is another important element of the relational maintenance strategy (Kelleher & Miller, 2006). A previous study found that task sharing did not affect online blog posting (Kelleher & Miller, 2006). However, in this study, task sharing improved social media brand engagement.

The above discussion and the research findings indicate that a relational maintenance strategy is needed to maintain relationships. However, in the Bangladesh context, one of the components of the relational approach that was not practised thoroughly was responsiveness. Thus, maintaining sustainable engagement becomes very challenging for the organisation's brand pages due to the lack of timely response. This research demonstrates that employing conversational human voice and communicating relational commitment not only creates brand page engagement, but also shows greater customer loyalty and satisfaction. These findings indicate that future research can be extended by applying a relational approach to social media brand engagement and its outcome. Another new insight from this research is that the Gen Z generation expects more humour from brand pages in Bangladesh. Hence, these findings also raise the question of how

brands counteract informality with professionalism, confirming that extremely casual communications does not damage credibility and trust.

CONCLUSION

This research sheds light on the factors affecting consumers' willingness to interact more with brand pages. Findings from the in-depth interviews show that the relational approach influences the public to engage with Facebook brand pages, which predicts the public's key behavioural intentions. These key behavioural intentions also enhance the understanding of how relationship management should be frequently utilised in social media (Facebook) to build relationships.

This research emphasises the necessity to tailor relational maintenance strategies to diverse customers and industries. Since customer anticipations, communication techniques, and engagement drivers differ across sectors, PR professionals must adjust their strategies accordingly. For example, findings indicate that brands in service sectors may prioritise responsiveness and task sharing to enhance trust. In contrast, lifestyle brands may leverage positivity and conversational human voice to facilitate engagement. Moreover, strategic communication can help organisations achieve certain goals (Abidin et al., 2024), and public relations is an asset for organisational stakeholder relationship building (Barry & Hafiz, 2024).

There are a number of limitations that needs to be acknowledged. The first limitation is that this research is qualitative and has a small sample size. This research's small sample size does not represent the entire population of social media users in Bangladesh. The second limitation is that this research did not focus on any particular brands or industries from Bangladesh. The third limitation is that this research only focused on a particular social media setting, Facebook. The fourth limitation is that this research only focused on the Bangladeshi customer perspective of the relational approach on social media.

While findings from this qualitative study have provided some interesting insights into customer behaviour on social media (Facebook) brand engagement, future research should focus on a quantitative study with a hypothesised relationship between variables regarding relational maintenance strategy and social media brand engagement. Future research should also focus on large sample sizes and various social media platforms (Instagram, X, TikTok). This could offer more richly nuanced insights into the complexities of customer behaviour on different social media. Moreover, future research should focus on particular brands from different industries and country settings, which will enhance this research findings.

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To share, or not to share? The effects of parenting communication styles and sharenting on young adults' mental health

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ABSTRACT

The increasing prevalence of parents sharing their children's personal information on social media, known as sharenting, has raised concerns about its potential impact on young adults' privacy, autonomy, and mental health. Despite growing scholarly interest, research examining the consequences of sharenting on young adults' mental health remains limited. Grounded in Baumrind's Theory of Parenting Styles, this study investigates the relationship between parenting communication styles, sharenting practices, and the mental health of Malaysian young adults. Using a quantitative approach, data were collected from 205 respondents through purposive sampling. The findings reveal that parenting styles significantly influence young adults' mental health, with authoritative and permissive parenting showing positive associations, while authoritarian and neglectful parenting being linked to poorer mental health outcomes. However, sharenting did not have a significant direct effect, suggesting the need for further exploration of factors such as cultural attitudes, digital literacy, and frequency of exposure. These findings highlight the critical role of parenting communication styles in shaping mental well-being and emphasise the importance of mindful digital parenting. Future research should expand on these findings by incorporating more diverse samples, longitudinal designs, and qualitative approaches to capture a deeper understanding of the evolving parent-child dynamic in the digital age.

Keywords: *Sharenting, parenting communication style, digital parenting, digital exposure, social media*

INTRODUCTION

Sharenting can be seen as an evolution of the more traditional parenting methods such as authoritative, authoritarian, permissive and neglectful parenting, each having its own distinct implications towards the parent-child relationship (Makwana et al., 2023). However, despite the growing discourse on the ethical dilemmas of sharenting, there remains a gap in research regarding the long-term consequences of sharenting on young adults (Doğan-Keskin et al., 2023). Moreover, the digital nature of sharenting necessitates further investigation to better understand its psychological and social effects (Tosuntaş & Griffiths, 2024).

In the Malaysian context as a collectivist culture, cultural values strongly influence parental decisions regarding online sharing (Doğan-Keskin et al., 2023; Hashim et al., 2021). This can be seen in the desire to maintain close relationships and to create community bonds through frequent interactions on platforms like social media (Hashim et al., 2021; Sahharon et al., 2024). However, according to Lo et al. (2020), a notable gap exists in localised research, particularly on how the evolution of traditional practices on parenting styles may affect a child's mental health. These gaps underscore the need for further research on how sharenting practices affect the mental health outcomes of young adults.

Drawing upon Baumrind's theory on parenting communication styles, this study seeks to investigate the relationship between parenting communication styles and sharenting practices on the mental health of Malaysian young adults. The objectives of this study are threefold. Specifically, this study aims to determine (1) the relationship between parental communication styles and mental health of young adults, (2) the relationship between sharenting on social media and mental health of young adults, and (3) the relationship between parental communication, sharenting on social media and mental health of young adults.

Based on these objectives, this study hypothesised that different parenting communication styles, including authoritarian (H1), authoritative (H2), permissive (H3), and neglectful (H4), have a significant effect on the mental health of young adults. Additionally, it is also hypothesised that sharenting has a significant effect on the mental health of young adults (H5).

LITERATURE REVIEW

Parenting style and Baumrind's theory have been major themes in developmental psychology, drawing a great deal of scientific interest (Fadlillah & Fauziah, 2022). Diana Baumrind's foundational work in the 1960s defined three basic parenting styles: authoritative, authoritarian, and permissive, with the neglectful style added later by Maccoby and Martin in the 1980s (Li, 2024). These styles are defined by the degree of responsiveness and demandingness that parents demonstrate towards their children (Dalimonte-Merckling & Williams, 2020).

The authoritative parenting style is characterised as a method that is high in responsiveness and demandingness, which has been consistently associated with positive developmental outcomes (Abundis-Gutierrez, 2018). Research done by Hayek et al. (2022) corroborated the findings from Baumrind's which showed children who were raised by authoritarian parents perform better socially, academically and as well as socially.

According to Tiwari (2022), authorities have strengthened the belief that a balanced approach to parenting, including warmth and discipline, is the most effective way to promote healthy growth.

On the contrary, the authoritarian parenting style that is characterised by its low responsiveness and high demandingness, has been linked to producing quite adverse outcomes in different aspects (Vasiou et al., 2023). Findings from Chen (2022) highlighted the possible detrimental effects this method has on children's self-esteem and independence, suggesting that the authoritarian approach may contribute to an increase of anxiety and violence among young children. This also highlights the important role of giving children parental warmth and responsiveness in promoting healthy outcomes.

The permissive parenting style is known for its characteristic of being high in responsiveness but also having low demandingness (Cherry, 2022). This has often been associated with various outcomes such as feeling of entitlement as well as being irresponsible and unaccountable (Harris, 2024). While children with permissive parents may seem to benefit from having experienced high levels of warmth and freedom from their parents, research from Heger (2023) suggests that children under permissive households may struggle with high levels of anxiety and self-control issues.

Neglectful parenting is a style that is much defined by its low levels of both responsiveness and demandingness and is the subject that has been of growing concern. Beck Aguilera et al. (2023) found that this parenting produces negative consequences, such as increased risk of children's behavioural problems and developmental delays. These findings have prompted requests for initiatives to help parents and reduce the overall negative effects inattentive parenting could do to a child (Mikolajczak et al., 2019).

Drawing upon Baumrind's initial typology of parenting styles and dimension, this research combines it with the evolution of the typology by Eleanor Maccoby and John Martin in the 1980s. By doing so, this extends understanding on not just the normal range of parenting communication styles but also includes a more deviant pattern of communication style among parents. By incorporating sharenting into the framework in Figure 1, it reflects the evolution from the initial conceptualisations of parental communication styles to the more current practices in parental communication.

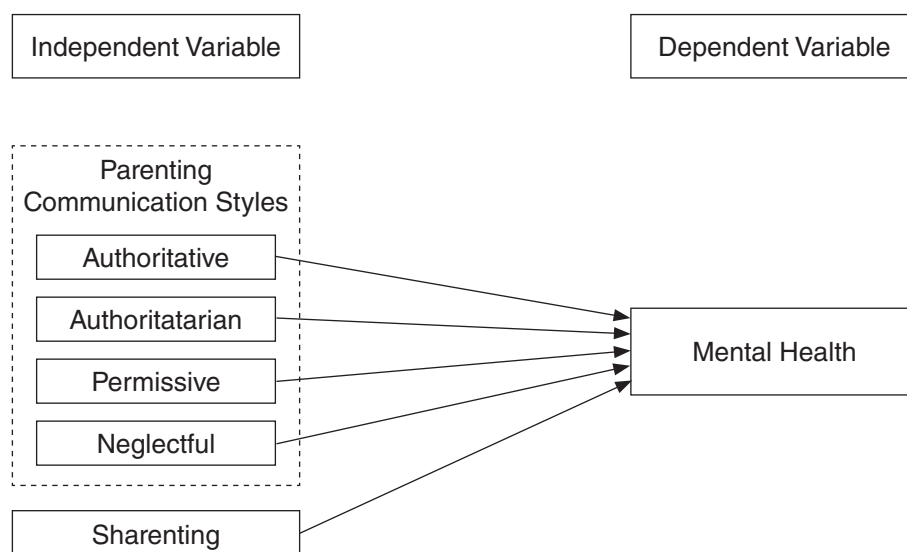


Figure 1. The revised framework of parental communication styles

Sharenting

The emerging practice of “sharenting”, is an occurrence where parents sometimes share detailed information on their journey of parenting (Kopecky et al., 2020). It is the act of exposing their children’s information, story and photos online, particularly through social media platforms such as Instagram and Tiktok (Doğan-Keskin et al., 2023). Studies found that parents often share content of their children to seek validation from other parents in the community (Wardhani & Sakarasih, 2021). However, these practices have raised concerns regarding children’s independence, privacy and confidentiality (Noiseux et al., 2018). Further, scholars like Ugwudike et al. (2024) argue that sharenting could violate children’s digital footprint and consent in the future.

Miller-Ott et al. (2023) highlighted the lack of clear guidelines for parents regarding appropriate online sharing. Their study calls for consensus-driven approaches that balance children’s privacy rights with the benefits of social media for community engagement and family connection (Miller-Ott et al., 2023). Ranzini et al. (2020) found that uncontrolled sharenting adversely affects children’s peer relationships and self-esteem, with long-term implications as children become increasingly aware of their digital presence. Esfandiari and Yao (2022) noted that children may develop anxiety and embarrassment over content shared by parents on social media, highlighting the importance of fostering open family communication in digitally active households.

Effect of authoritative parenting style on mental health

A study done by Romero-Acosta et al. (2021) established a strong correlation between authoritative parenting style and the positive mental health outcomes in children, where depression and anxiety are observed less. An environment created by parents with authoritative methods plays a huge role in the development of positive coping mechanisms in children. Teuber et al. (2021) expanded these findings by presenting an idea that adolescents raised in authoritative households are more likely to showcase better academic motivation and achievements. These outcomes are associated with their parents’ encouraging independence and supportiveness (Hidayanti et al., 2023).

Liu et al. (2020) mentioned the importance of parents having a role in fostering open communication with their children. Regular, sympathetic talks in authoritative households, helps children to understand their own feelings and experiences, while also strengthening their mental health resilience (Liu et al., 2020). Further, the emotional safety fostered by parents who practise authoritative methods protects adolescents from stress and peer-related issues (Zarra-Nezhad, 2019).

Effect of authoritarian parenting style on mental health

Authoritarian parenting, characterised by high demandingness and low responsiveness (Kuppens & Ceulemans, 2019), has been linked to negative mental health outcomes across cultures. Azman et al. (2021) found that this style contributes to mental health challenges, with children often experiencing heightened anxiety and depression (Echedom et al., 2018). Bi et al. (2018) reported decreased self-esteem and increased psychological distress in adolescents raised in authoritarian households, likely due to limited warmth and autonomy (Krauss et al., 2020).

This style has also been associated with academic stress. Gao (2023) found that strict obedience and high academic expectations in authoritarian families can lead to

burnout. Cultural context plays a role, however; in some settings, authoritarian traits may be seen as caring and motivating (Yim, 2022). This suggests a need for cultural sensitivity when evaluating parenting impacts (Makwana et al., 2023). However, research agrees that authoritarian parenting can harm mental health. Children raised under strict control often exhibit higher anxiety and lower social competence (Garcia et al., 2018; Huang et al., 2019). Biernesser et al. (2020) also linked authoritarian digital control with emotional alienation and depression, showing its influence extends into online behaviours.

Effect of permissive parenting style on mental health

Permissive parenting, marked by high responsiveness and low demandingness (Cherry, 2022), is associated with warmth and emotional openness. Children in permissive households often show higher self-esteem and better social skills (Aziz et al., 2021), and greater autonomy in expressing their identity (Kong & Yasmin, 2022). However, this approach may hinder self-discipline and impulse control (Kong & Yasmin, 2022).

Research also links permissiveness with academic and behavioural challenges. Baidoo-Anu et al. (2019) noted that such children often struggle academically and engage in risk-taking behaviours. A lack of structure may lead to poor motivation and a sense of irresponsibility (Shengyao et al., 2024). Mental health effects are mixed; although the environment may seem nurturing, adolescents may still experience anxiety and depression due to inconsistent guidance and difficulty navigating social norms (Moore, 2017; Rakhshani et al., 2022).

Effect of neglectful parenting style on mental health

Neglectful parenting, low in both responsiveness and demandingness (Kuppens & Ceulemans, 2019), is often marked by parental disengagement and failure to meet children's emotional or psychological needs (Cherry, 2022). It is widely associated with adverse mental health outcomes. Marici et al. (2023) reported higher rates of depression, anxiety, and feelings of worthlessness among children from neglectful homes. Such children often feel emotionally abandoned (Salavera et al., 2022), which undermines self-esteem and psychological resilience (Holland, 2019).

Long-term effects have also been documented. Dou et al. (2020) found a link between neglectful parenting and emotional disorders, delinquency, and substance abuse. These children frequently experience poor academic performance and social difficulties due to limited supervision and emotional support (Goagoses et al., 2023; Harris, 2024; Roy & Giraldo-García, 2018). Neglect can also impact adult mental health, as individuals raised in such environments report ongoing psychological challenges (Bornstein & Zlotnik, 2008; Chaudhary et al., 2023).

Effect of sharenting on mental health

"Sharenting," a blend of "sharing" and "parenting," refers to the frequent posting of children's personal information, photos, and videos by parents on social media platforms (Meliani et al., 2023; Tan & Dhanapal, 2022). While some scholars highlight its role in fostering community support and enabling parents to share experiences (Verswijvel et al., 2019), others caution against its adverse implications. Recent research underscores potential harm to children's mental health, particularly regarding privacy, consent, and autonomy (Doğan-Keskin et al., 2023). As children mature, they may feel discomfort or

embarrassment over past content shared by parents, which can contribute to anxiety and diminished self-esteem (Doğan-Keskin et al., 2023; Hashim et al., 2021; Liu et al., 2023; Walrave et al., 2022). Moreover, sharenting has been associated with heightened risks of cyberbullying and online exploitation, further endangering children's psychological well-being and their trust in parental judgment (Bezáková et al., 2021; Real Research Media, 2023; Tan & Dhanapal, 2022).

METHODOLOGY

This study employed a quantitative approach to examine the relationship between parenting communication styles, sharenting practices, and the mental health of Malaysian young adults. The quantitative method enables the collection of objective data that can be generalised through statistical analysis (Campbell et al., 2020; Williams, 2021).

The target population comprised Malaysian young adults aged 18 to 40. According to the 2007 Youth Societies and Youth Development Act (2014), youth in Malaysia are defined as individuals aged 15 to 40. As of 2024, Malaysia's youth population is estimated at 14.68 million (Department of Statistics Malaysia, 2024; Institute for Youth Research Malaysia, 2024). This study specifically targeted individuals who had experienced diverse parenting communication styles in their upbringing. A purposive sampling method was used to select participants who met predefined inclusion criteria: Malaysian young adults (18–40 years old) with exposure to various parenting styles (Hossan et al., 2023; Thomas, 2022). G*Power analysis determined a minimum sample size of 138 to ensure statistical power (Faul et al., 2007). However, 205 valid responses were collected, exceeding this threshold.

Data were collected through a structured survey distributed via social media using Google Forms. The questionnaire comprised seven sections and 36 items. Section 1 captured demographic data. Sections 2 through 7 measured parenting styles (authoritative, authoritarian, permissive, neglectful), sharenting, and mental health. Items on mental health were interspersed across sections to examine its correlation with each independent variable.

SPSS (Statistical Package for the Social Sciences) was used for data analysis, including reliability testing and correlation analysis, due to its robust statistical capabilities (Hair et al., 2019). A pilot study with 26 participants (12% of the main sample) was conducted to assess the instrument's reliability and validity. This aligns with literature suggesting 20–30 participants for pilot testing (Abdulameer et al., 2020; Cocks & Torgerson, 2013; Malhotra, 2020).

Reliability was evaluated using Cronbach's alpha (Taber, 2018). Parental communication constructs demonstrated acceptable to excellent reliability, ranging from $\alpha = 0.703$ (authoritative) to $\alpha = 0.892$ (authoritarian). Sharenting also showed strong reliability ($\alpha = 0.875$). The mental health scale achieved an α value of 0.709, meeting the threshold for social science research (Hair et al., 2019; Malhotra, 2020).

Table 1. Reliability analysis (Cronbach's alpha) (N=26)

Construct	Chronbach's alpha	Items
Authoritarian	0.892	6
Authoritative	0.703	5

Table 1. (con't)

Construct	Chronbach's alpha	Items
Permissive	0.827	5
Neglectful	0.854	6
Sharenting	0.875	5

Parenting communication styles measurement

To measure parenting communication styles, this study adopted Diana Baumrind's foundational typology of authoritative, authoritarian, and permissive styles (Sirait & Slameto, 2024), along with the neglectful style later expanded by Maccoby and Martin in the 1980s (Bornstein & Zlotnik, 2008; Estlein, 2016; Louis, 2022; Venkatesh et al., 2019). These four parenting dimensions were assessed using a 6-point Likert-type scale, which has been shown to prompt more deliberate responses by discouraging neutrality (Suárez-Álvarez et al., 2018).

Authoritative parenting was measured through items such as “my parents enforce rules on me without asking what I think,” “my parents pay attention to my opinion,” and “my parents’ support and guidance has helped me cope with stress.” Authoritarian items included “my parents punish me by taking my privileges away,” “my parents use criticism to improve my behaviour,” and “my parents yell or shout when I misbehave.”

Permissive parenting was assessed using items like “my parents give in to my desires when I throw a tantrum,” “my parents ignore my bad behaviour,” and “my parents’ support but lack of behavioural control has helped me cope with stress.” Neglectful parenting was measured through statements such as “my parents use threats without giving reasons,” “my parents do not try to understand my feelings,” and “my parents’ lack of support and encouragement has helped me cope with stress.”

Sharenting measurement

Sharenting was measured with questions such as “my parents often shared pictures or videos of me on their social media profile”, “my parents often write on social media about me”, “my parents often share photographs or videos that may cause frustration and/or embarrassment to me.”, “I feel like my privacy is invaded when my parents share my photographs or videos on social media.”, and “my parents’ oversharing about me on social media has helped me cope with stress”.

Mental health measurement

The mental health variable in this study was assessed through measures of “my parents’ support and guidance has helped me cope with stress”, “my parents’ guidance and lack of support has helped me cope with stress”, “my parents’ being supportive but having lack of control over my behaviour has helped me cope with stress”, “my parents’ lack of control over my behaviour has helped me cope with stress”, “my parents’ lack of support and encouragement has helped me cope with stress” and “my parents oversharing about me on social media has helped me cope with stress”. These questions were incorporated into each independent variable section of the survey to examine their correlation with other key variables.

FINDINGS AND DISCUSSION

Table 2 presents the demographic background of respondents, showing a balanced gender distribution with 4.9% opting not to disclose their gender. Most participants were aged 18–23 (85 respondents), followed by those aged 24–29 (72 respondents). The majority identified as Malay (78.1%), with smaller representations from other ethnicities.

Table 3 indicates that authoritative parenting had the highest mean score ($M = 4.13$), suggesting it is the most prevalent parenting style perceived by respondents. This aligns with findings that authoritative parenting fosters self-efficacy, autonomy, and goal orientation (Hayek et al., 2022; Tiwari, 2022). Conversely, sharenting recorded the lowest mean ($M = 2.95$), implying it is less commonly practised. This supports prior studies highlighting privacy, consent, and autonomy concerns in digital parenting (Doğan-Keskin et al., 2023), possibly due to an increasing awareness of children's digital rights and the risks of oversharing.

Table 2. Demographic characteristics (N=205)

Characteristics	Frequency	Percentage (%)
Gender		
Male	95	46.3
Female	100	48.8
Prefer not to say	10	4.9
Age		
18–23	85	41.5
24–29	72	35.1
30–35	17	8.3
36–40	31	15.1
Ethnicity		
Malay	157	78.1
Chinese	21	10.4
Indian	16	7.9
Bajau	1	0.5
Kadazan	1	0.5
Bugis	2	1
Iban	2	1
Rungus	1	0.5

Table 3. Parental communication styles (N=205)

Construct	M	SD
Authoritarian	3.5423	1.144
Authoritative	4.1343	0.846
Permissive	3.2090	1.061
Neglectful	3.3433	1.032
Sharenting	2.9453	1.257

Correlation analysis of parenting styles and mental health

A correlation analysis was conducted to examine the relationship between parenting communication styles and mental health. As shown in Table 4, all five parenting styles were significantly correlated with mental health ($p < .05$). The strongest correlation

emerged between neglectful parenting and mental health ($r = .694$), suggesting that lack of parental support strongly undermines young adults' mental well-being. Sharenting also showed a strong correlation ($r = .684$), highlighting potential mental health risks linked to excessive parental sharing online (Doğan-Keskin et al., 2023; Tan & Dhanapal, 2022).

Table 4. Relationship between parenting communication styles and mental health

Variable(s)	r-value	p-value
Authoritarian	3.5423	1.144
Authoritative	4.1343	0.846
Permissive	3.2090	1.061
Neglectful	3.3433	1.032
Sharenting	2.9453	1.257

Regression analysis of parenting styles and mental health

To further explore the impact of parenting styles on mental health, a multiple regression analysis was conducted (Table 5). Authoritative parenting emerged as a significant positive predictor ($\beta = .440$, $p < .001$), suggesting that warmth and clear expectations are associated with higher well-being—consistent with literature on emotional resilience and autonomy (Tiwari, 2022). In contrast, authoritarian parenting was a significant negative predictor ($\beta = -.345$, $p < .001$), reinforcing links to increased anxiety and stress due to emotional suppression (Bi et al., 2018). Permissive parenting showed a positive relationship ($\beta = .211$, $p = .003$), indicating that autonomy may enhance psychological well-being, though it may also impair emotional regulation (Hosokawa & Katsura, 2018). Neglectful parenting had a significant negative effect ($\beta = -.224$, $p = .011$), highlighting risks tied to emotional insecurity and disengagement (Holland, 2019). Sharenting was not a significant predictor ($\beta = .029$, $p = .722$), implying its influence on mental health may be limited or mediated by factors like digital literacy or perception of online exposure (Doğan-Keskin et al., 2023; Liu, 2023).

Table 5. Multiple regression analysis on parenting communication styles and mental health

Predictor Variable	B	SE	β	t	p-value
(Constant)	3.055	0.395	—	7.730	<.001
Authoritarian	-0.389	0.088	-0.345	-4.406	<.001
Authoritative	0.675	0.108	0.440	6.245	<.001
Permissive	0.251	0.083	0.211	3.040	0.003
Neglectful	-0.273	0.107	-0.224	-2.554	0.011
Sharenting	0.030	0.083	0.029	0.356	0.722

CONCLUSION

This study aimed to explore the effects of parenting communication styles and sharenting, on the mental health of young adults in Malaysia aged 18 to 40 years old. The findings of this study highlight the complex relationships between parenting styles and mental health. The predominance of authoritative parenting among Malaysian parents suggests

that most young adults grow up in supportive and structured environments, which are associated with positive mental health outcomes. Despite the negative connotation authoritarian parenting often receives, results show a moderate positive correlation with mental health, suggesting that it may foster resilience in some individuals. However, regression analysis indicate that when authoritarian parenting becomes excessively rigid or punitive, it has a detrimental effect on well-being.

Neglectful parenting had the strongest positive correlation with mental health, a surprising finding that diverges from existing literature. This suggests that certain aspects of what is perceived as neglect, such as increased independence, may actually be beneficial for some young adults. However, the regression analysis still confirmed that neglectful parenting, when extreme, has a negative effect on mental health. This discrepancy highlights the need for further exploration into different forms of neglect and their distinct psychological consequences.

The results also indicate that sharenting, despite being a growing digital phenomenon, does not have a significant direct effect on mental health within this sample. This suggests that other moderating variables, such as personal digital literacy or parental discretion in online sharing, may influence the extent to which sharenting affects young adults' well-being. These findings underscore the need for further research on how emerging digital parenting practices shape mental health outcomes in different cultural contexts.

This study faced several limitations that should be acknowledged. One key limitation is the relatively small sample size, which may restrict the generalisability of the findings. Additionally, the sample was not fully representative of the broader 18–40 age group in Malaysia, as the majority of respondents were from the dominant ethnic group and fell within the 18–30 age range. This may have led to an underrepresentation of the experiences of minority subgroups and older participants. Furthermore, the reliance on self-reported data introduces the potential for response bias, as participants may have provided socially desirable answers or misjudged their own experiences and mental health status.

Future research should expand the sample size and improve demographic diversity by including participants from various ethnic backgrounds, socio-economic statuses, educational levels, and geographic regions, particularly ensuring greater representation of individuals aged 30 to 40 years old. Longitudinal studies are needed to examine the long-term effects of different parenting styles, especially the unexpected findings regarding neglectful parenting, and to explore potential moderating factors in the relationship between sharenting and mental health, such as digital literacy and cultural attitudes. Incorporating qualitative methods, such as interviews and case studies, could provide deeper insights into the complexities of parenting styles and psychological well-being. Additionally, given that sharenting showed no significant effect on mental health in this study, future research should explore other aspects of digital parenting, including cyberbullying, parental monitoring, and young adults' perspectives on their online presence, to better understand the broader implications of growing up in a digital environment.

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To empower or not: The 2023 *Barbie* movie's impact on feminist perceptions among young women

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ABSTRACT

The 2023 *Barbie* movie has sparked widespread discussion on feminism and empowerment, challenging traditional gender roles and promoting modern ideals. This research examines how the female empowerment narrative and themes in the 2023 *Barbie* movie impact young Malaysian women's perceptions of empowerment. Expanding on Ahmad's (2020) analysis of positive *Barbie* portrayals, this study addresses the gap in research concerning the film's impact on Malaysian audiences. It also investigates how cultural and societal factors affect the reception of the movie's feminist messages. Using a qualitative approach, 15 young Malaysian women participated in focus group discussions to explore their lived experiences. Findings reveal that the movie reinforced feminist ideals by challenging stereotypes, though its impact was facilitated by cultural context. Participants appreciated its diverse representation but critiqued its limited inclusivity (e.g., body diversity). The study highlights the need for culturally nuanced feminist media to resonate with non-Western audiences. Nevertheless, the movie's messages of empowerment and breaking gender norms were particularly well received by the participants.

Keywords: **Female empowerment, feminist perceptions, young women, gender norms, stereotypes**

INTRODUCTION

Research background

Although the iconic *Barbie* doll has long been acknowledged and embodied as a symbol of femininity and beauty, recent high-profile criticisms of its promotion of narrow female goals and unattainable beauty standards are disturbing. As a result, the movie *Barbie* (2023) reimagines Barbie as an empowered figure, tracing her journey of self-discovery and individualism after her exile from *Barbieland*. Given that gender roles and expectations are changing significantly in Malaysia, this change in representation offers a rare chance to investigate how the movie affects young women's views on empowerment.

This study explores how the *Barbie* film influences young Malaysian women's perceptions of femininity and self-empowerment. Film is a powerful tool for shaping societal views, especially among youth, and media portrayals of empowered women can challenge stereotypes and reshape self-image (Dittmar et al., 2006; Gogoi, 2022; Kord & Krimmer, 2011). Directed by Greta Gerwig, *Barbie* highlights themes of empowerment, career ambition, and self-discovery, making it a relevant case for examining media's role in redefining gender norms (Leuven, 2023).

In Malaysia's changing social landscape, where more women seek education and careers beyond traditional roles, the film provides insight into media's influence on shifting gender attitudes. The research utilised Gerbner's cultivation theory, which posits that frequent media exposure influences viewers' attitudes, and Hofstede's cultural dimensions, which offer a framework for comprehending the impact of cultural values on media reception. This research explores how young Malaysian women seeking empowerment and self-discovery perceive the film's messages within a culture that balances traditional values with modern aspirations ("Deeper than expected", 2023).

Additionally, in Malaysia's diverse media landscape, young women are exposed to multiple narratives on empowerment. The *Barbie* movie (2023) provides a distinct opportunity to explore female empowerment through a redefined narrative of self-discovery. Based on Ahmad's (2020) research on *Barbie*'s positive depictions, this study examines how cultural and societal factors influence Malaysian viewers' reception of the *Barbie* movie and its themes of female empowerment. According to Ningtyas (2021), *Barbie* films demonstrate a new femininity, promote gender role reversal, and emphasise feminism.

While media's role in shaping empowerment beliefs has been extensively studied in gender media research, very few studies have explored the specific impact of the *Barbie* movie (2023) on young Malaysian women's perceptions of empowerment. This study seeks to fill this gap by addressing two key objectives: (i) to explore how the female empowerment narrative and themes in the 2023 *Barbie* movie impact young Malaysian women's perceptions of empowerment, and (ii) to investigate how cultural and societal factors influence the reception of the movie's feminist messages. This study highlights how media representations shape young women's self-perceptions and societal expectations.

Understanding how Malaysian audiences perceive the *Barbie* movie's empowerment messages requires examining the country's rich cultural and societal backdrop. While media influence theories provide useful frameworks, their interaction in this context remains unclear. This research aims to fill the gap by investigating how changing gender norms and religious influences affect cinema reception and interpretation. Ultimately, this study

seeks to assess the *Barbie* movie's influence on young Malaysian women's empowerment beliefs and its potential role in shaping gender norms and societal transformation.

While previous studies have explored *Barbie's* feminist evolution, they primarily focus on Western audiences (Ningtyas, 2021). There is limited research on how non-Western viewers, particularly young Malaysian women, interpret these messages within their cultural and societal contexts. By addressing this gap, this study examines how the *Barbie* movie (2023) influences young Malaysian women's perceptions of empowerment. Furthermore, while Gerbner's cultivation theory explains how repeated media exposure influences perception, it does not fully account for how cultural values moderate this effect (Gerbner et al., 1994). Similarly, Hofstede's cultural dimensions provide a lens for understanding media reception in different societies (Hofstede, 1984), but their application to feminist media narratives in Malaysia remains underexplored. By addressing this gap, this study offers insights into how young Malaysian women internalise and respond to global feminist narratives within the context of their evolving gender norms.

LITERATURE REVIEW

Overview of Barbie movie and feminism

The *Barbie* movie franchise has long explored themes of empowerment and individuality, often challenging traditional gender norms through its portrayal of strong female characters (Manzoor et al., 2016). These representations influence younger viewers by promoting progressive gender roles and sparking discussions on feminism (Goh et al., 2021). In Malaysia, where cultural, religious, and societal factors shape the feminist discourse, the reception of international feminist media like *Barbie* is particularly significant (Veldmeijer, 2023).

Mattel's shift from reinforcing beauty ideals to promoting diversity and empowerment reflects evolving global feminist values. Recent films, including Greta Gerwig's 2023 adaptation, feature *Barbie* in roles like astronaut and environmental activist, using media to inspire young audiences (Vered & Maizonniaux, 2016; Veldmeijer, 2023). These portrayals contribute to broader conversations on gender equality in Malaysia, where media plays a crucial role in shaping societal attitudes (Goh et al., 2021).

By integrating feminist themes into accessible narratives, *Barbie* fosters media literacy and encourages critical thinking, particularly among Malaysian youth. As the local feminist movement gains momentum, such media can help challenge patriarchal norms and promote inclusivity. Ultimately, *Barbie* exemplifies how feminist media can drive social change across cultural boundaries (Vered & Maizonniaux, 2016; Veldmeijer, 2023).

Media influence on societal and cultural perception

Movies and television shows are powerful cultural artefacts that reflect and shape societal norms, values, and individual perceptions. Past research has explored various facets of feminism in media, including how media can empower voices through feminist ethics (Chenxi, 2023). Marshall McLuhan's assertion, "the medium is the message," underscores the transformative role of media, influencing not only the content consumed but also how audiences interpret it (McLuhan, 1964). Further, Tomaigă (2019) highlighted that

viewers often incorporate elements of film and television characters into their own lives, demonstrating how media blurs the lines between fiction and reality. This phenomenon reveals the complex interplay between media narratives and personal identity, significantly influencing societal perceptions across diverse cultural contexts.

Cultural differences play a crucial role in shaping how media messages are received and internalised (Arias, 2019). For instance, themes of female empowerment in Greta Gerwig's *Barbie* (2023) may resonate differently with young women in Malaysia compared to those in Western countries. Factors such as traditional family structures, societal expectations, and cultural values uniquely influence how empowerment is understood and practised (Zhang, 2017). This highlights the dynamic relationship between media content and audience interpretation, as cultural filters shape the ways in which global narratives are localised.

Mass media serves as a central force in cultural production, interweaving identities, values, and behaviours into its narratives (Zhang, 2017). Research demonstrates that media functions as a tool for navigating societal changes, with audiences using films and other forms of entertainment to adapt to evolving cultural landscapes (Poepsel, 2021). Thus, in the Malaysian context, young women negotiating traditional and modern values may engage with media messages differently than audiences in other cultural settings (Jogezai, 2020).

Studies such as Kustiawan et al. (2022) emphasise the reciprocal relationship between global media and local culture. The cultural frameworks of its audiences can both influence and reshape media, leading to distinctive interpretations of universal themes like empowerment. Analysing the reception of the *Barbie* movie within the Malaysian context offers insight into how global media interacts with local cultural factors, ultimately shaping young women's understanding of empowerment and agency. This underscores the need for culturally nuanced approaches to studying media influence in diverse societies.

Influence of prominent figures on media

Barbie's evolution from a fashion-centric doll to a diverse icon, taking on roles like astronaut, Olympic athlete, and the lead in Greta Gerwig's live-action film, underscores the significant influence that iconic media figures wield in shaping the perceptions and aspirations of young women (Yakali, 2023). This evolution illustrates *Barbie's* impact on questioning conventional gender roles and fostering conversations regarding femininity. Yakali (2023) argues that *Barbie* redefines societal norms by altering the ways in which young girls perceive and interact with the notion of empowerment. Her narratives have emerged as a notable cultural influence, prompting audiences to re-evaluate conventional notions of womanhood. In addition, the movie's messages contribute to a dialogue on gender equality, aligning with discussions on how female leadership communication styles can navigate and influence perceptions in professional contexts (Cheah Lynn-Sze, 2021).

Barbie's influence can be compared to that of other significant figures, whether they are fictional or real. Characters such as Hermione Granger from *Harry Potter* and Disney's Raya in *Raya and the Last Dragon* (2021) have transformed the portrayal of female strength and independence in media (Ambarwati, 2022). In Malaysia, figures like Tan Sri Michelle Yeoh and Pandelesa Rinong exemplify the significant impact that role models can have on societal transformation. Qing (2023) presented these women as exemplars of ambition and competence, illustrating how their accomplishments in global

cinema and the Olympics serve as inspiration for young Malaysians to overcome obstacles. The narratives presented not only confront patriarchal stereotypes, but also create opportunities for a new generation of empowered women, especially within culturally diverse settings such as Malaysia (Ambarwati, 2022).

Furthermore, Disney's *Raya* serves as a compelling illustration of how media can promote empowerment by featuring relatable, multidimensional characters. Young audiences looking for role models who defy conventional gender stereotypes will find *Raya's* portrayal as a leader to be particularly appealing (Ambarwati, 2022). These representations motivate Malaysian youths to adopt courage and creativity in their endeavours, illustrating the potential of media to confront established societal norms. The influence of these figures enables media to reshape the aspirations of women worldwide, simultaneously honouring cultural diversity and resilience (Qing, 2023; Yakali, 2023).

Gerbner's cultivation theory and Hofstede's cultural dimensions

Gerbner's cultivation theory suggests that extended exposure to media affects viewers' understanding of reality, influencing societal norms and personal perspectives (Morgan et al., 2017). This is evident in characters like *Barbie*, who evolved from a fashion doll to a symbol of empowerment. Repeated portrayals of strong female lead, such as *Barbie* and Disney's *Raya*, can normalise traits like resilience among young women (Fikkers et al., 2021). However, cultural factors moderate this influence. As Balakrishnan (2022) notes, ethnic and societal norms shape how media portrayals are internalised.

Hofstede's cultural dimensions framework helps explain these differences, especially in collectivist societies like Malaysia, where empowerment is often viewed through the lens of family and community rather than individual ambition (Hofstede et al., 2019). Qing (2023) found that Malaysian youth interpret the success of icons like *Barbie* or Michelle Yeoh as collective achievements. Balakrishnan (2022) further stresses that ethnicity significantly influences intercultural communication and media interpretation.

Together, Gerbner's and Hofstede's theories highlight how cultural context shapes the reception of empowerment messages. While the cultivation theory explains media's long-term influence, Hofstede's dimensions reveal the cultural filters that mediate this effect. Characters like *Raya* resonate in Malaysia by aligning leadership with harmony and cooperation (Ambarwati, 2022). Overall, these perspectives underscore the need to account for local cultural nuances when analysing global feminist media.

METHODOLOGY

Data collection method

This study employed a qualitative research approach to explore how young Malaysian women perceive women's empowerment after viewing the *Barbie* movie (2023). Unlike quantitative research, which relies on numerical data, qualitative research focuses on the lived experiences, attitudes, and emotions associated with a phenomenon (Tenny et al., 2022). This approach is particularly suited for complex human behaviours, as it captures the how and why behind participants' perceptions.

Tenny et al. (2022) highlighted the value of qualitative research in understanding personal experiences as they occur in real-world contexts. Under the qualitative

orientation, phenomenological studies reside within the framework that focuses on the lived and everyday experience. Neubauer et al. (2019) further emphasised the importance of analysing experiences as they are lived, allowing researchers to gain new understandings and appreciations of the subjective realities of participants.

Research sample and size

The study employed non-probability sampling. According to Naderifar et al. (2017), non-probability sampling involves researcher-selected samples. Purposive sampling was used to identify and interview young Malaysian women who saw *Barbie* in cinemas. This method ensured that participants had first-hand exposure to the film's themes, making them suitable for the study.

Hennink and Kaiser (2022) recommended 9 to 17 qualitative research interviews, depending on data saturation. This study conducted three focus group discussions (FGDs), with a total of 15 participants, ensuring a diverse range of perspectives. Each focus group provided in-depth discussions and critical insights on how the *Barbie* movie (2023) influenced their views on female empowerment. The interactive nature of focus groups allowed participants to engage in dynamic discussions, validating George's (2021) assertion that this method is effective in capturing complex viewpoints.

Participants were also asked about their favourite movie genres as part of the discussion to contextualise their media preferences and viewing habits. This data provides a richer understanding of how their general film consumption habits may shape their interpretation of the *Barbie* movie (2023). However, the analysis of favourite movie genres is not included in this section, as it forms part of the data analysis and findings in later sections. The participants' profiles are detailed in Table 1.

Table 1. Profiles of participants

Participant	Age	Exposure to <i>Barbie</i> Movies	Favourite Movie Genres
I1	24	Watched the new <i>Barbie</i> movie (2023), and all <i>Barbie</i> flicks	Horror
I2	20	Watched the new <i>Barbie</i> movie (2023), and all <i>Barbie</i> flicks	Horror & Action
I3	22	Watched the new <i>Barbie</i> movie (2023), and one <i>Barbie</i> flick	Slice of Life
I4	22	Watched the new <i>Barbie</i> movie (2023), and most of the <i>Barbie</i> flicks	Anything except horror or thriller
I5	21	Watched the new <i>Barbie</i> movie (2023), and a few of the <i>Barbie</i> flicks	Historical Fiction
I6	21	Only watched the new <i>Barbie</i> movie (2023).	Horror, Action & Romance
I7	24	Watched the new <i>Barbie</i> movie (2023), and some <i>Barbie</i> flicks	Action, Thriller, Adventure, Dystopian & Sci-Fi
I8	31	Only watched the new <i>Barbie</i> movie (2023)	Horror & Thriller
I9	23	Watched the new <i>Barbie</i> movie (2023), and some <i>Barbie</i> flicks	Romance
I10	29	Only watched the new <i>Barbie</i> movie (2023)	Romance, True Stories & Animated
I11	27	Watched the new <i>Barbie</i> movie (2023), and most of the <i>Barbie</i> flicks	Romance

Table 1. (con't)

Participant	Age	Exposure to <i>Barbie</i> Movies	Favourite Movie Genres
I12	22	Watched the new <i>Barbie</i> movie (2023), and all <i>Barbie</i> flicks	Fantasy & Romance
I13	25	Watched the new <i>Barbie</i> movie (2023), and some <i>Barbie</i> flicks	Romance & Horror
I14	24	Watched the new <i>Barbie</i> movie (2023), and some <i>Barbie</i> flicks	Horror & Fantasy
I15	23	Watched the new <i>Barbie</i> movie (2023), and some <i>Barbie</i> flicks	Sci-Fi, Fiction & True Stories

The participants' profile which shows young Malaysian women's *Barbie* film exposure and preferred movie genres, helps us understand cultural and individual aspects that impact women's empowerment beliefs. All participants watched the 2023 *Barbie* movie, demonstrating its mainstream appeal. However, participants' experience with prior *Barbie* films varied greatly. Some had seen most of the franchise, while others had only seen the latest. The level of understanding about *Barbie's* evolving depictions of femininity and empowerment varied.

Horror, action, romance, fantasy, and historical fiction were among these women's chosen genres, indicating a range of interests and possible interpretive frameworks for media. Horror and romance were the most mentioned genres, suggesting audience choices may differ, juxtaposing resilience and emotional intimacy. Dystopian, sci-fi, and factual stories were popular with the 2023 *Barbie* movie viewers. Conversely, *Barbie* fans preferred romance and fantasy, which fit the franchise's themes. Based on their genre tastes and Barbie brand interactions, participants may view the empowering messages in the 2023 film differently.

By examining these media consumption patterns, this study provides a deeper understanding of how different audience segments perceive and internalise the empowerment messages in *Barbie* (2023). The diversity in genre preferences suggests that individual media experiences play a role in shaping how young Malaysian women interpret feminist narratives, making this an important aspect to consider in the analysis.

FINDINGS AND DISCUSSION

Thematic analysis

This study utilised thematic analysis to systematically organise interview data into distinct topics, facilitating the analysis and comparison of findings (Favero & Heath, 2012). According to Topi and Tench (2020), this approach identifies patterns and trends, highlighting study gaps and advancing knowledge. The research questions of this study guided the identification of significant themes, with participants' responses serving as evidence.

The transcription data, such as words, phrases, and sentences, were examined, categorised and finalised into themes (Chuan, 2018). This process allowed the study to identify commonalities and distinctions in participants' perspectives. Thematic analysis, as described by Fitch and Third (2014), provides insights into how cultural contexts shape media interpretations, supporting Frame and Ihlen's (2018) argument that cultural settings

influence how individuals process media. By organising key themes, this study unveils shared understandings and contradictions in how young Malaysian women perceive the *Barbie* movie's empowerment messages. Next, the following sections discuss the themes that emerged from the analysis in describing how young Malaysian women feel about the movie's message of empowerment.

Young Malaysian women's perceptions of women's empowerment as portrayed in the Barbie movie (2023)

I think I like the physicist Barbie that won a Nobel Prize. (Interviewee 2)

The movie showed Barbie as intellectual and good in leadership, breaking away from society's traditional expectations. (Interviewee 5)

It didn't change my mind but reinforced my belief that strength lies in being authentic. (Interviewee 7)

The findings provide a comprehensive understanding of how young Malaysian women perceive women's empowerment as portrayed in the *Barbie* movie (2023). From the three focus group discussions, five major themes emerged:

- 1. Positive Role Models and Representation**
- 2. Empowerment and Inspiration**
- 3. Exploration of Gender Roles and Norms**
- 4. Positive Reinforcement of Feminist Ideals**
- 5. Prominent Girl Power Representation.**

Positive role models and representation

Participants consistently highlighted the movie's diverse and strong female characters as relatable and aspirational role models. For example, one participant stated, "*I think I like the physicist Barbie that won a Nobel Prize,*" reflecting an appreciation for the representation of women excelling in non-traditional domains such as STEM. Others praised the movie for breaking away from societal expectations, as seen in the comment, "*The movie showed Barbie as intellectual and good in leadership, breaking away from society's traditional expectations.*" This aligns with Gill and Orgad's (2016) assertion that media plays a vital role in normalising female excellence across various domains, including STEM and leadership roles.

The depiction of Barbie as an intellectual and capable leader challenges traditional gender expectations. One participant noted:

The movie showed Barbie as intellectual and good in leadership, breaking away from society's traditional expectations. (Interviewee 5)

This statement underscores Gerbner's cultivation theory, which posits that repeated exposure to progressive media narratives can shape viewers' perceptions of social roles

(Gerbner et al., 1994). By presenting *Barbie* as a competent and empowered figure, the film contributes to shifting audience expectations regarding women's leadership potential.

Empowerment and inspiration

The movie's emphasis on self-discovery and empowerment inspired many participants. However, while it was praised for reinforcing confidence and ambition, its transformative impact was limited. One participant expressed:

It didn't change my mind but reinforced my belief that strength lies in being authentic.
(Interviewee7)

This sentiment reflects Bandura's social cognitive theory (1986), which suggests that media representation alone may not radically alter beliefs but can reinforce existing perspectives. Participants who have already embraced feminist ideals found the film affirming rather than eye-opening. This highlights the varying degrees of media influence, with some viewers internalising messages differently based on prior exposure to feminist narratives.

Exploration of gender roles and norms

The movie actively challenges traditional gender norms by depicting *Barbie* as both nurturing and assertive, and *Ken* as questioning his own identity in a male-dominated world. Participants noted that the film broke stereotypes by showing that femininity and ambition are not mutually exclusive.

The movie challenges the idea that women should always be gentle and accommodating. It shows that leadership and emotional depth can coexist.
(Interviewee 8)

This theme aligns with Connell's (2002) concept of gender order, which explains how societal expectations influence gender behaviours. By portraying a reversal of power dynamics in Barbie Land and the struggles of patriarchal influence in the real world, the movie forces audiences to rethink gender roles in everyday life.

Positive reinforcement of feminist ideals

Many participants felt the film did not necessarily introduce new feminist ideas to them but instead reinforced their existing beliefs about gender equality.

The film didn't teach me feminism, but it made me realize how often women have to work twice as hard to be taken seriously.
(Interviewee 6)

This connects with Hooks' (2015) perspective on feminism as a continuous learning process—while some audiences may have discovered feminist concepts through the film, others used it as a means of validating their experiences. The film's subtle critiques of workplace sexism, beauty standards, and the burden of perfection resonated with young Malaysian women, many of whom already engage with feminist discourses online.

Prominent girl power representation

A significant takeaway from the film was its celebration of girl power and collective female strength. Participants particularly enjoyed scenes where women uplift each other rather than compete, which contrasted with many traditional media portrayals of female rivalry.

I liked that the movie wasn't just about one Barbie saving the day—it was about all of them working together. That's real empowerment.

(Interviewee 12)

This aligns with Gill and Orgad's (2016) concept of post-feminism, which suggests that modern feminism in media has evolved to emphasise collective success rather than individual empowerment. The film's representation of women supporting each other stood out as a refreshing alternative to outdated tropes of women competing for male attention or social status.

Cultural and societal factors influence on young Malaysian women's perception of women empowerment in the Barbie movie

Participants also expressed diverse perspectives on how the film's feminist messages align with Malaysian cultural values. The findings revealed four key themes regarding cultural and societal influences:

- 1. Cultural Relevance on Women Empowerment**
- 2. Selective Representation of Gender Challenges and Stereotypes**
- 3. Impact on Gender Perceptions in Malaysia**
- 4. Diverse but Incomplete Representation**

Cultural relevance on women empowerment

Many participants appreciated the progressive messages in the movie but questioned their practicality within Malaysian society, where traditional gender expectations persist.

Young women in Malaysia would appreciate the progressive portrayal of women, but there may be concerns about its relevance to traditional values.

(Interviewee 4)

This highlights the tension between adopting modern feminist ideals and preserving deeply rooted cultural norms. This aligns with Hofstede's (2001) cultural dimensions theory, which identifies Malaysia as a collectivist society with strong gender role expectations. The results suggest that although global feminist narratives can inspire, their full impact in Malaysia may depend on contextualising these ideals to resonate with local cultural sensibilities.

Selective representation of gender challenges and stereotypes

The theme of selective representation elicited mixed responses. While participants acknowledged that the movie addressed universal gender issues, such as patriarchy, many highlighted its relevance to Malaysia's specific cultural challenges. For example, one participant remarked,

For Malaysian women, serving men is ingrained in our culture. The movie highlighted how this expectation is global, not just Malaysian.

(Interviewee 9)

This observation illustrates how the film's portrayal of gender challenges reflects local realities while simultaneously offering a broader, universal perspective. This finding is consistent with research by Mohd Noor and Leong (2013), who noted that traditional Malaysian gender roles often prioritise familial and societal obligations for women, potentially limiting personal ambitions. The film's ability to address these shared struggles was perceived as both validating and enlightening for participants.

Impact on gender perceptions in Malaysia

Many participants saw the film as validating rather than reshaping their understanding of gender roles. However, the movie encouraged them to critically examine societal expectations of women in their communities. The movie's portrayal of empowerment resonated deeply, encouraging participants to re-examine traditional gender roles. Some expressed that the film reinforced the belief that women can balance ambition with nurturing qualities.

One participant stated that the movie's optimistic portrayal of empowered women, such as *Barbie* excelling in leadership while breaking stereotypes, served as an aspirational model. This aligns with Bandura's social cognitive theory (1986), which underscores the role of media as a powerful tool for modelling behaviour and influencing beliefs. By showcasing diverse examples of women empowerment, the film provided participants with a relatable and motivational blueprint for redefining societal expectations.

Diverse but incomplete representation

Participants generally praised the film's diversity in showcasing women of different backgrounds and abilities, but some felt it still conformed to Western beauty standards.

The representation of characters in wheelchairs and Nobel Prize winners effectively delivered its message of inclusivity and empowerment.

(Interviewee 15)

Additionally, some criticised the lack of body diversity, with one participant observing that:

The movie mainly depicted thin characters, limiting inclusivity. More genuine representation would have been impactful.

(Interviewee 7)

This aligns with Gill and Orgad's (2016) findings that while media plays a crucial role in fostering inclusivity, gaps in representation can perpetuate exclusionary norms. The results suggest that while the film succeeded in promoting gender and ethnic diversity, there is room to improve its portrayal of body inclusivity to ensure a more comprehensive representation of empowerment.

The findings suggest that young Malaysian women generally viewed *Barbie* (2023) as an empowering film, particularly for its portrayal of female leadership, self-discovery,

and gender role challenges. However, its impact was largely affirmational rather than transformative, reinforcing rather than reshaping existing beliefs. The study highlights how media representation interacts with cultural norms, influencing how young women perceive empowerment.

DISCUSSION

The study supports and extends the cultural sensitivity theory (Chen, 2021) by demonstrating that global feminist narratives must be adapted to local cultural values to ensure effective engagement. While *Barbie* (2023) presents Western ideals of empowerment, Malaysian audiences filtered these messages through their own societal norms and expectations, leading to varied interpretations. This reinforces the argument that media and communication practices must incorporate cultural contexts when addressing global issues like gender equality.

Additionally, the findings challenge the universality of Western feminist narratives, particularly their emphasis on individualism and liberation, which may not fully align with the collectivist and familial values of the Malaysian society (Hofstede, 2001). While the film promotes self-empowerment, most participants indicated that Malaysian women's empowerment is often perceived within a communal or familial framework, emphasising harmony over radical independence. This suggests that existing feminist media theories should expand to better account for cultural variations in how empowerment is conceptualised and experienced.

The study also builds upon Bandura's social cognitive theory (1986), which highlight media's role in shaping attitudes and behaviours through observational learning. The findings suggest that while *Barbie* (2023) successfully modelled positive female leadership and career representation, its impact was more affirmational than transformational. Participants who already embraced feminist ideals found the film reinforcing, whereas those with more traditional perspectives did not necessarily change their views. This contrasts with previous studies (e.g., Gill & Orgad, 2016), emphasising the transformative potential of feminist media; instead, the present study highlights the selective influence of media based on prior socialisation and cultural positioning.

This research offers several new insights into the role of the global feminist media in diverse cultural settings:

1. Cultural Adaptation of Feminist Media

Previous research (Nakamura, 2018) argues that media content must be tailored to local audiences for effective engagement. This study expands on this by showing that even universally appealing feminist messages require cultural contextualisation. While Malaysian participants acknowledged the film's empowering themes, some felt that certain Western feminist ideals conflicted with traditional Malaysian values, such as family obligations and gender expectations.

2. Selective Representation and Gaps in Inclusivity

The study also identifies gaps in representation, particularly regarding body diversity and localised cultural perspectives. While *Barbie* (2023) was praised for its diverse cast and female role models, participants noted that the predominant portrayal of thin, Western beauty standards limited its inclusivity. This supports Gill and Orgad's

(2016) critique of mainstream feminist media still adhering to certain exclusionary beauty norms and highlights the need for more inclusive depictions of empowerment that resonate with broader cultural and body diversity.

3. Empowerment as Affirmation Rather Than Transformation

Unlike some feminist media studies that emphasise film as a catalyst for ideological change, this research suggests that media consumption often reinforces pre-existing beliefs rather than radically altering them. Participants already aligned with feminist ideals found the film validating, while those with more traditional views did not significantly change their stance. This adds nuance to discussions on media effects, suggesting that while feminist films can inspire, they may not necessarily serve as turning points for those deeply embedded in traditional gender norms.

4. Bridging Global and Local Feminist Narratives

Finally, the study contributes to the ongoing discussion on global vs. local feminism by illustrating that women's empowerment is understood differently across cultures. While Western feminist narratives often prioritise individual autonomy, Malaysian participants viewed empowerment as a balance between personal ambition and communal/familial responsibilities. This suggests a need for more intersectional and culturally responsive feminist storytelling in global media.

These findings provide valuable insights for media producers and communicators regarding the need to customise content for culturally specific audiences:

- **Balancing Universal and Local Feminist Messages**
Barbie (2023) received acclaim for depicting women in leadership and unconventional roles, but the variation in Malaysian audience responses suggests that cultural differences shape media reception. Content creators should consider local cultural values when producing feminist narratives to ensure more effective resonance with diverse audiences.
- **Enhancing Inclusivity in Media Representation**
While the film was praised for its gender and professional diversity, limited body diversity was noted as a shortcoming. Media practitioners should broaden their representation to include a wider range of body types and localised cultural elements, ensuring that empowerment narratives are more relatable to global audiences.
- **Recognising the Role of Cultural Context in Feminist Media Impact**
The study suggests that feminist media's influence is not universal; instead, it is filtered through cultural expectations and personal beliefs. Media campaigns promoting gender equality should engage with local cultural discourses, rather than assume that Western feminist ideals will automatically translate into different societal contexts.

CONCLUSION

This study underscores the critical role of cultural context in shaping how global media representations of women's empowerment are perceived. While *Barbie* (2023) delivers a progressive feminist narrative, its impact varies depending on local cultural norms and values. The findings reinforce Bandura's social cognitive theory (1986), which suggests that media serves as a behavioural model, but its effectiveness depends on how well it aligns with viewers' social and cultural realities. In collectivist societies like Malaysia,

feminist messages that emphasise individual autonomy may not fully resonate unless they also acknowledge communal and familial values.

The study contributes to the media and feminist theory by demonstrating that Western feminist ideals must be culturally contextualised for global audiences. While the film's empowerment themes were widely appreciated, some participants felt they clashed with traditional Malaysian values, particularly regarding women's familial responsibilities and gender expectations. This aligns with Hofstede's (2001) cultural dimensions theory, which emphasises how collectivist cultures may interpret empowerment differently than individualist societies. Additionally, the study expands discussions on media inclusivity, supporting Gill and Orgad's (2016) argument that diversity in media should extend beyond ethnicity to include body diversity and different cultural realities.

Despite its contributions, this study has several limitations. The small and non-generalisable sample, based on a qualitative approach with a limited number of participants, means the findings may not represent all young Malaysian women. Future research could expand the sample across different regions in Malaysia to provide a broader perspective on how cultural background influences media reception. Comparative studies involving older generations, men, or individuals from various ethnic backgrounds would provide a more holistic view of how feminist media is received. Moreover, examining a wider range of feminist films—both Western and locally produced—could offer deeper insight into the role of cultural context in shaping media reception. Cross-cultural and longitudinal studies could further explore how exposure to feminist narratives may shift gender norms over time. Ultimately, this research emphasises the need for feminist media to be both inclusive and culturally adaptive to achieve meaningful global impact.

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Moderating role of privacy concerns on the determinants of mobile tourism adoption among Generation Z

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ABSTRACT

Mobile tourism is transforming how consumers interact with travel services, yet its adoption remains limited among Generation Z in Selangor. Trust in wireless networks plays a pivotal role in encouraging mobile tourism app usage; however, heightened privacy concerns may undermine this trust and reduce users' willingness to adopt such technologies. Grounded in an integrated framework combining the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), this study examines the influence of perceived usefulness, perceived ease of use, social influence, and wireless trust on mobile tourism adoption intentions. It also explores the moderating role of privacy concerns on the relationship between wireless trust and behavioural intention. A quantitative cross-sectional survey of 384 Gen Z respondents was conducted in Selangor. The results indicate that perceived usefulness, ease of use, social influence, and wireless trust significantly influence mobile tourism adoption intentions. Importantly, privacy concerns was found to moderate the effect of wireless trust, weakening its positive influence. These findings contribute to mobile tourism literature by offering a comprehensive framework for understanding Gen Z adoption behaviour and provide practical implications for enhancing wireless trust while mitigating privacy concerns to promote broader adoption.

Keywords: *Mobile tourism adaption, Generation Z, privacy concern, wireless trust, social influence, perceived usefulness, privacy concerns, moderating effects, digital trust in tourism*

INTRODUCTION

The increasing reliance on mobile technologies has transformed the tourism sector by enhancing user experience and enabling seamless interactions between consumers and service providers. Certainly, the rise of mobile phone contributed to the explosion of social media as an inextricable part of daily life.

Generation Z, being digital natives, is at the forefront of the adoption of mobile tourism. However, despite the advantages, privacy concerns remain a critical barrier that deters users from embracing mobile tourism solutions (Dinev & Hart, 2006). Existing literature emphasises the importance of wireless trust in driving adoption, yet the moderating effects of privacy concerns have been overlooked. This study aims to bridge this gap by examining the direct relationships between key determinants and adoption intentions while investigating the moderating role of privacy concerns. Thus, this research has three objectives:

- (i) To identify key determinants of mobile tourism adoption among Generation Z in Selangor,
- (ii) To examine the relationship between wireless trust and mobile tourism adoption intentions, and
- (iii) To analyse the moderating role of privacy concerns in the relationship between wireless trust and adoption intentions.

LITERATURE REVIEW

Mobile tourism adoption

The increasing prevalence of mobile applications in the tourism and hospitality sector reflects a significant shift in consumer behaviour. As reported by Statista (Ceci, 2025), consumers downloaded approximately 116 billion mobile applications in 2019, with projections up to 184 billion by 2024. This trend underscores the growing importance of mobile marketing tools in facilitating information exchange between consumers and service providers (Karjaluoto & Leppäniemi, 2005). In the hospitality industry, mobile apps enhance customer experiences by providing convenient access to information and services, thereby supporting strategic marketing efforts (Kwon et al., 2013). These applications offer a wide range of services, including booking management, navigation, and personalised recommendations, which contribute to customer satisfaction and loyalty. Current literature contributes to understanding how mobile apps are leveraged in emerging markets, particularly in developing countries, to optimise tourism services (Liebana-Cabanillas et al., 2020; Litvin et al., 2018). Moreover, the evolution of smart tourism ecosystems highlights the need for integrating intelligent mobile applications that cater to the dynamic expectations of modern travellers.

Generation Z: Digital natives and mobile tourism enthusiasts

Generation Z (Gen Z), defined as individuals born between 1997 and 2012 (Anderson, 2019), is characterised by its high level of technological fluency and seamless interaction with mobile technologies. As “digital natives” (Prensky, 2001), Gen Z has grown up surrounded by smartphones, social media, and mobile applications, making them highly

proficient technology users (Azudin et al., 2023). Unlike previous generations, they engage with multiple devices simultaneously and rely on mobile apps for communication, entertainment, and decision-making (Kemp, 2020). According to Kemp (2023), an astonishing 87% of Generation Z admitted to sleeping with their smartphones nearby, underscoring their dependence on mobile devices, while 79% reported using mobile apps to stay connected with friends and family.

Additionally, Generation Z exhibits a higher propensity than other generations to engage in mobile-related activities such as mobile banking, e-commerce, and social networking (Wang et al., 2023). Their reliance on mobile tourism applications (MTAs), such as Skyscanner, Booking.com, and Google Maps, enables them to explore destinations, book accommodations, and access real-time travel information effortlessly (Xu et al., 2021). However, despite their enthusiasm for mobile technologies, Generation Z expresses heightened privacy concerns and awareness of the potential risks associated with sharing personal information through mobile platforms (Kim & Lee, 2022). These privacy concerns may moderate the relationship between wireless trust and mobile tourism adoption intentions, emphasising the need for developers to ensure secure and trustworthy applications. As digitally engaged and tech-savvy consumers, understanding the adoption behaviour of Generation Z is critical for mobile tourism providers aiming to meet their expectations for personalised, secure, and efficient mobile services (Zhang et al., 2024).

Key factors influencing generation Z's use of mobile tourism applications

Understanding the factors that influence the adoption of mobile tourism applications (MTAs) among Generation Z is essential for developing user-centric, trustworthy, and effective digital tourism platforms. This study extends the Technology Acceptance Model (TAM) by incorporating key variables relevant to mobile contexts, including wireless trust and privacy concerns, which are especially critical for tech-savvy but privacy-aware users like Generation Z (Kim & Lee, 2022; Xu et al., 2021). Drawing from the extended TAM framework, five key factors were identified:

- i. Perceived Usefulness reflects the extent to which users believe that using the mobile tourism app will enhance their travel planning and experience. For Generation Z, apps must offer timesaving, efficient, and informative features to be perceived as useful (Davis, 1989; Zhang & Li, 2024).
- ii. Ease of Use denotes the level of effort required to use the app. Well-designed with intuitive navigation and low complexity increases user satisfaction and adoption rates among younger digital natives (Chen et al., 2020; Kemp, 2020).
- iii. Social Influence refers to the influence of peers, social media, and online communities in encouraging app adoption. For Generation Z, peer validation and digital recommendations significantly impact decision-making in mobile app usage (Femenia-Serra et al., 2021; Schomakers et al., 2022).
- iv. Wireless Trust represents users' confidence in the app's reliability, data integrity, and security. High levels of wireless trust positively influence adoption intentions, especially when users are expected to share personal or financial information (Gefen et al., 2003; Wang et al., 2023).

- v. Privacy Concerns acts as a moderating variable that may weaken the positive relationship between wireless trust and behavioural intention. Although Generation Z values convenience and functionality, they are also acutely aware of potential data misuse and privacy violations, which may reduce their willingness to adopt mobile tourism platforms (Falcão et al., 2019; Xu et al., 2021).

This study builds on the M-S-QUAL framework, which highlights these elements as critical to constructing a comprehensive conceptual model (Taneja et al., 2024). This research framework aligns with recent literature and builds upon the Mobile Service Quality (M-S-QUAL) perspective, emphasising the importance of functional value, security, and user experience in app adoption (Taneja et al., 2024). By examining these interrelated factors and their influence on mobile tourism adoption behaviour, this study offers a comprehensive view of the determinants relevant to the preferences, habits, and privacy expectations of Generation Z mobile users.

Technology acceptance model (TAM) and the role of privacy concerns and wireless trust

The Technology Acceptance Model (TAM), developed by Davis (1989), remains one of the most widely used frameworks to understand user adoption of technology. TAM posits that two key constructs—Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)—significantly influence individuals' intentions to use technology. Perceived Usefulness refers to the degree to which an individual believes that using a system enhances their performance (Abu Seman et al., 2020), while Perceived Ease of Use reflects the extent to which the system is perceived as effortless to operate (Davis, 1989; Venkatesh & Davis, 2000). Behavioral Intention (BI) to adopt a technology is directly influenced by these perceptions, ultimately leading to actual usage. Although TAM has been widely validated across various domains, it has been critiqued for its inability to fully capture the influence of social, contextual, and psychological factors affecting user adoption, particularly in the context of mobile technologies (Chen et al., 2020; Kim & Lee, 2022).

To address these limitations, TAM2 was introduced by Venkatesh and Davis (2000), incorporating social influence and cognitive instrumental processes to better explain user acceptance. However, recent studies highlight the need to explore privacy concerns and wireless trust as additional determinants influencing mobile technology adoption, particularly among Generation Z users in the tourism industry (Smith et al., 2022; Wang et al., 2023). While TAM assumes that rational decision-making drives adoption, it does not adequately consider the role of privacy concerns and trust in moderating the relationship between perceived usefulness, ease of use, and adoption intentions (Xu et al., 2021; Zhang & Li, 2024). As MTAs require users to share sensitive personal information, privacy concerns significantly impact the trust-adoption relationship by influencing the willingness of Generation Z to engage with such platforms (Santos et al., 2021).

Incorporating privacy concerns and wireless trust into TAM

In the context of mobile tourism adoption, wireless trust (WT) is an essential construct that reflects users' confidence in the reliability, security, and privacy of mobile applications. Gefen et al. (2003) argue that trust is a critical factor influencing technology adoption,

particularly when users perceive potential risks in online environments. Recent studies have extended TAM by incorporating privacy concerns and trust as moderating variables, demonstrating that higher privacy concerns can weaken the positive impact of trust on adoption intentions (Kim et al., 2022; Xu et al., 2021). Consequently, in this study, privacy concerns was proposed as a moderator between wireless trust (WT) and behavioural intentions (BI), potentially weakening the positive influence of trust when privacy concerns are high.

TAM in mobile tourism adoption: An extended perspective

The extended TAM framework used in this study investigates how perceived usefulness, ease of use, social influence, and wireless trust influence adoption intentions of MTAs among Generation Z in Selangor. By integrating privacy concerns as a moderating factor, this model accounts for the nuanced relationship between trust and adoption intentions, thereby addressing the theoretical gaps in traditional TAM. Zhang and Li (2024) emphasised that Generation Z users, while highly engaged with mobile technologies, are also more cautious about privacy risks, which underscores the importance of considering privacy concerns and wireless trust in the adoption framework.

The Technology Acceptance Model (TAM), introduced by Davis (1989), posits that perceived usefulness (PU) and perceived ease of use (PEOU) are primary drivers of technology adoption. This model has been widely used in tourism technology research, particularly in explaining traveller behaviour toward mobile applications (Morosan & DeFranco, 2016). However, TAM has been criticised for lacking contextual and social factors, which are crucial in a mobile and highly interactive environment (Leung & Law, 2007).

The Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) expands on TAM by incorporating performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). This model has proven especially effective in studies of mobile technology in dynamic sectors such as tourism (Wang et al., 2016). UTAUT addresses the limitations of TAM by capturing external influences and technological infrastructure, both of which are highly relevant in the mobile tourism context.

This study integrated TAM and UTAUT to offer a comprehensive lens for examining mobile tourism adoption among Generation Z. While TAM captures internal cognitive appraisals of technology (e.g., usefulness and ease), UTAUT introduces broader determinants such as peer influence and environmental support. Integrating these models allows for a more robust investigation of behavioural intention, especially among Gen Z, who are digital natives but also highly privacy-conscious (Priporas et al., 2017).

Furthermore, existing studies often use these models in isolation, limiting explanatory power. This study contributes to the literature by combining both, particularly in the underexplored context of mobile tourism adoption moderated by privacy concerns. In doing so, it offers an enriched theoretical foundation to explain how individual, social, and contextual factors interact to shape Gen Z's technology adoption behaviours in tourism.

Conceptual framework

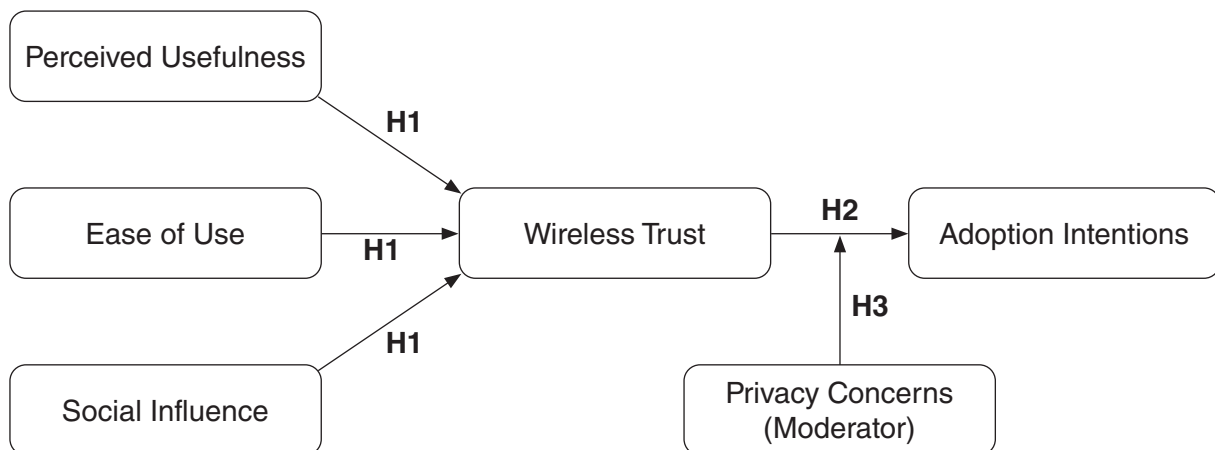


Figure 1. Conceptual framework

Figure 1 outlines the conceptual framework combining TAM and UTAUT constructs to investigate mobile tourism adoption among Generation Z. Constructs from TAM, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), capture users' internal beliefs about the effectiveness and usability of mobile tourism applications. UTAUT constructs, namely Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC) extend the model by including social and environmental enablers that are particularly relevant in digital tourism ecosystems.

The integration was designed to address both individual cognitive evaluations and broader contextual influences on mobile technology use. The addition of Privacy Concerns as a moderating variable reflects Gen Z's growing sensitivity to data security and its potential impact on trust and behavioural intention (Shin, 2010). This integrated model helps unpack the nuanced ways in which Gen Z navigates mobile tourism technologies under the lens of utility, ease, social pressure, support systems, and privacy awareness.

Hypotheses development

This study aims to explore the determinants of mobile tourism adoption among Generation Z in Selangor by integrating key constructs from the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The conceptual framework investigates the direct relationships between perceived usefulness, ease of use, social influence, and wireless trust on mobile tourism adoption intentions. Furthermore, it analyses the moderating role of privacy concerns in the relationship between wireless trust and adoption intentions.

H1: Perceived usefulness, ease of use, and social influence are significant determinants of mobile tourism adoption among Generation Z in Selangor

The first objective of this study is to assess the impact of perceived usefulness, ease of use, and social influence on mobile tourism adoption intentions among Generation Z in Selangor. Perceived usefulness (PU) reflects the degree to which users believe that adopting mobile tourism applications will enhance their travel experience (Venkatesh

et al., 2016). Ease of use (EOU) assesses the level of effort required to operate mobile tourism apps, with greater ease leading to higher adoption intentions (Sánchez-Torres et al., 2021). Social influence (SI) highlights the role of societal expectations, peer influence, and social media recommendations in shaping technology adoption behaviours, which is particularly significant among digitally engaged populations like Generation Z (Dwivedi et al., 2019).

H2: Wireless trust positively influences mobile tourism adoption intentions among Generation Z in Selangor.

The second objective is to explore the relationship between wireless trust and mobile tourism adoption intentions among Generation Z in Selangor. Wireless trust (WT) reflects users' confidence in mobile tourism applications regarding data security, reliability, and privacy protection (Alalwan et al., 2018). High levels of wireless trust foster confidence in mobile platforms, leading to greater acceptance and usage of mobile tourism applications (Chong et al., 2012). Trust in wireless technologies plays a pivotal role in alleviating security concerns and encouraging the adoption of mobile tourism technologies (Navio-Marco et al., 2019).

H3: Privacy concerns moderate the relationship between wireless trust and mobile tourism adoption intentions, such that higher privacy concerns weaken the positive relationship.

The third objective is to analyse the moderating role of privacy concerns (PC) in the relationship between wireless trust and adoption intentions. Privacy concerns represent users' fears regarding data security, information misuse, and personal privacy while using mobile tourism applications (Sun et al., 2015). Despite high levels of wireless trust, privacy concerns can discourage users from adopting mobile tourism apps due to perceived risks (Chang et al., 2016). Privacy concerns weaken the trust-adoption relationship by increasing the perception of vulnerability and risk in mobile environments (Hassan et al., 2021).

METHODOLOGY

Data collection

A quantitative approach was adopted using a cross-sectional survey distributed through Google Forms. Purposive and snowball sampling methods targeted Generation Z consumers active on social media platforms. The target sample size was 384, calculated using the Krejci and Morgan method (Krejcie & Morgan, 1970).

Data analysis

Perceived usefulness, ease of use, social influence, wireless trust, privacy concerns, and adoption intentions were measured using validated scales adapted from prior research. The questionnaire incorporated a 5-point Likert scale to capture responses. Descriptive statistics summarised the data, while multiple regression analysis examined direct

relationships. Moderation analysis using the PROCESS macro by Hayes tested the moderating effects of privacy concerns, and normality testing ensured data appropriateness (Hair et al., 2010).

FINDINGS AND DISCUSSION

Profile of respondents

Table 1 summarises the demographic characteristics of the 384 respondents who participated in the study on mobile tourism adoption among Generation Z in Selangor, Malaysia. Descriptive information reveals that 56.5% of respondents were female and 43.5% were male. The majority of respondents were single (88.8%), reflecting the demographic characteristics of Generation Z. Regarding travel frequency, 45.8% of respondents reported travelling 4 to 5 times within the past 12 months. In terms of monthly household income, 68.5% of respondents indicated earning within the range of RM3,000 – RM5,000, reflecting the financial status of young adults who were either studying or just entering the workforce.

Table 1. Demographic characteristics of respondents (n=384)

Characteristics	Frequency	Percent (%)
Gender		
Male	167	43.5
Female	217	56.5
Marital Status		
Single	341	88.8
Married	43	11.2
Monthly Household Income (RM)		
Less than RM2,000	22	5.7
RM2,000 – RM3,000	41	10.7
RM3,000 – RM5,000	263	68.5
RM5,000 – RM7,000	38	9.9
More than RM7,000	20	5.2
Travel in the last 12 months		
Less than 3 times	65	16.9
3–4 times	98	25.5
4–5 times	176	45.8
More than 5 times	45	11.7

Reliability analysis

The results of the reliability analysis indicate that all constructs used in this study exhibit acceptable to excellent internal consistency, with Cronbach's alpha values ranging from 0.750 to 0.906. According to Nunnally (1978), Cronbach's alpha value of 0.70 or above is generally considered acceptable for social science research. Since all constructs exceeded this threshold, the measurement items can be considered reliable and valid for further analysis.

Table 2. Reliability analysis

Variables	Cronbach's Alpha	Number of Items
Perceived Usefulness (PU)	0.895	3
Perceived Ease of Use (PEOU)	0.906	4
Social Influence (SI)	0.868	4
Facilitating Condition (FC)	0.887	4
Wireless Trust (WT)	0.842	3
Privacy Concerns (PC)	0.750	3
Behavioural Intention (BI)	0.802	3

Normality testing results summary

Normality testing was conducted to assess whether the data from 384 respondents met the assumptions required for parametric analysis. The tests included the Shapiro-Wilk Test and Kolmogorov-Smirnov (K-S) test to evaluate the normality of the constructs: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Social Influence (SI), Facilitating Conditions (FC), Wireless Trust (WT), Privacy Concerns (PC), and Behavioural Intention (BI). The results indicate that PU, SI, FC, and WT followed a normal distribution with p-values > 0.05 in both tests, along with skewness and kurtosis values within the acceptable range of -1 to +1. Although PEOU exhibited a slight deviation from normality in the Shapiro-Wilk test (p-value = 0.033), the K-S test p-value > 0.05 and acceptable skewness and kurtosis values suggest that the deviation is negligible, and the data can be treated as sufficiently normal. Since all constructs met the normality requirements, parametric tests such as regression analysis and moderation effects testing can be conducted.

Table 3. Normality testing results

Variable	Shapiro-Wilk p-value	K-S p-value	Skewness	Kurtosis
Perceived Usefulness (PU)	0.104 (> 0.05)	0.959 (> 0.05)	-0.055	-0.069
Perceived Ease of Use (PEOU)	0.033 (< 0.05)	0.967 (> 0.05)	0.011	-0.454
Social Influence (SI)	0.095 (> 0.05)	0.913 (> 0.05)	-0.168	-0.086
Facilitating Condition (FC)	0.061 (> 0.05)	0.866 (> 0.05)	0.038	-0.397
Wireless Trust (WT)	0.346 (> 0.05)	0.998 (> 0.05)	-0.125	-0.042

Relationship between perceived usefulness, perceived ease of use, social influence, wireless trust, and behavioural intention to adopt MTAs

Multiple regression analysis was conducted to assess the relationship between perceived usefulness (PU), perceived ease of use (PEOU), social influence (SI), wireless trust (WT), and behavioural intention (BI) to adopt MTAs among Generation Z in Selangor. The results provide insights into the relative importance of these determinants in influencing mobile tourism adoption. PU has a positive and significant relationship with behavioural intention (BI) ($B = 0.245$, $p < 0.001$), suggesting that Generation Z is more likely to adopt MTAs when they perceive them as beneficial and effective in fulfilling their travel needs.

PEOU also demonstrates a significant positive relationship with BI ($B = 0.198$, $p < 0.001$), indicating that an easy-to-use mobile app increases the likelihood of adoption among Generation Z users. A user-friendly interface and minimal complexity contribute to higher adoption intentions. SI exerts a moderate but significant influence on BI (B

= 0.128, $p = 0.002$), indicating that peer recommendations, social media, and digital communities play an essential role in shaping the adoption behaviour of Generation Z. WT shows the strongest positive influence on BI ($B = 0.690$, $p < 0.001$), demonstrating that trust in the security, reliability, and data protection of MTAs significantly increases adoption intentions. Generation Z users are more inclined to adopt mobile apps when they trust that their personal information is secure.

Table 4. Multiple regression analysis of perceived usefulness, perceived ease of use, social influence, wireless trust, and behavioural intention to adopt MTAs

R-squared	0.011				
Adjusted R-squared	0.001				
F	1.073				
Sig.	<0.001				
Coefficients Table					
	Unstandardized Coefficients				VIF
	β	Std. Error	t	Sig.	95% CI
(Constant)	3.5131	.198	1.566	0.120	-
PU	0.245	0.045	5.444		1.145
PEOU	−0.0330	0.047	4.213		1.232
SI	−0.0028	0.041	3.122	0.002**	1.091
WT	0.0974	0.052	13.269	<.001	1.000

Wireless trust (WT) emerges as the most influential factor in driving adoption intentions, emphasising the importance of ensuring security and data privacy to build user confidence. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) confirm the importance of providing efficient, intuitive, and user-friendly mobile applications to attract Generation Z users. Social influence (SI) highlights the need for leveraging digital communities and peer recommendations to encourage mobile tourism adoption. These findings underscore the critical importance of enhancing MTAs by improving their functionality, usability, and security to align with the expectations of Generation Z users.

Moderating effect of privacy concerns on the relationship between wireless trust and behavioural intention to adopt MTAs

The moderation analysis was conducted to determine whether privacy concerns (PC) moderate the relationship between wireless trust (WT) and behavioural intention (BI) to adopt MTAs among Generation Z in Selangor. The results of the moderation analysis provide insights into whether privacy concerns strengthen or weaken the trust-adoption relationship.

Table 5. Moderation analysis of privacy concerns on the relationship between wireless trust and behavioural intention to adopt mobile tourism

R-squared	0.020				
Adjusted R-squared	0.013				
F	2.627				
Sig.	<0.001				
Coefficients Table					
	Unstandardized Coefficients				VIF
	β	Std. Error	t	Sig.	95% CI
(Constant)	2.1267	1.861	1.861	0.064	[-0.121, 4.374]
Wireless Trust	0.4710	1.698	1.698	0.090	[-0.074, 1.016]
Privacy Concerns	0.5692	1.649	1.649	0.100	[-0.109, 1.248]
Wireless Trust x Privacy Concerns	-0.1430	0.084	-1.700	0.090	[-0.308, 0.022]

The interaction term (WT $\times$ PC) was not statistically significant ($p = 0.090, > 0.05$), indicating that Privacy Concerns (PC) does not significantly moderate the relationship between Wireless Trust (WT) and Behavioural Intention (BI). Although the moderation effect is not statistically significant, the interaction plot suggests an interesting trend where higher privacy concerns appear to weaken the positive relationship between wireless trust and adoption intentions.

CONTRIBUTIONS AND IMPLICATIONS

From a managerial perspective, the study provides actionable insights for businesses and marketers aiming to increase the adoption of mobile tourism platforms. The strong influence of Perceived Ease of Use (PEOU) suggests that mobile apps should prioritise user-friendly interfaces with intuitive designs to reduce cognitive effort and improve the overall user experience (Kumar & Bhatt, 2022). Social Influence (SI) also emerged as a critical factor, indicating that marketing campaigns should leverage peer recommendations, influencer endorsements, and social proof to enhance trust and encourage adoption (Hossain et al., 2023). Additionally, the significant impact of Wireless Trust (WT) highlights the need for robust security measures, transparent privacy policies, and clear communication about data protection to build user confidence and reduce privacy-related concerns. These strategies can optimise mobile platforms, making them more appealing and trustworthy to Generation Z users.

The study also presents important policy implications for regulators and policymakers in the tourism and technology sectors. The findings emphasise the need for investment in digital literacy programs to enhance users' awareness of data privacy and cybersecurity risks while promoting safe engagement with mobile tourism technologies (Sharma et al., 2022). Policymakers should also encourage the development of privacy-compliant mobile applications by providing grants and incentives for IT businesses that prioritise user privacy and security. Moreover, expanding wireless network availability and affordability can address barriers to adoption, ensuring that mobile tourism technologies

are accessible and appealing to Generation Z. These policy initiatives can contribute to the growth of digital tourism and strengthen the overall tourism ecosystem in Malaysia.

Despite its contributions, the study acknowledges certain limitations that provide opportunities for future research. Expanding the sample size and including respondents from diverse geographic regions can enhance the generalisability of the findings. Additionally, future research should explore adoption behaviours of other generational cohorts, such as Generation Y, and examine the influence of emerging technologies such as augmented reality (AR) and artificial intelligence (AI) on mobile tourism adoption (Gretzel & Koo, 2021). Investigating cultural factors and their impact on technology acceptance can also provide a more comprehensive understanding of the determinants influencing mobile tourism adoption across different contexts.

CONCLUSION

This study provides a comprehensive analysis of the factors influencing mobile tourism adoption among Generation Z Malaysians. The findings confirm that Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Social Influence (SI), and Wireless Trust (WT) significantly impact Behavioural Intention (BI) to adopt MTAs (Alalwan et al., 2021; Kumar & Bhatt, 2022). By identifying these key determinants, the study contributes to the theoretical understanding of mobile tourism acceptance and offers practical recommendations for businesses, marketers, and policymakers to encourage greater adoption.

The implications extend beyond theoretical contributions by offering practical strategies to optimise mobile tourism platforms. For businesses, the findings highlight the importance of designing intuitive interfaces, enhancing trust through security measures, and leveraging social influence to drive adoption. Marketers can develop targeted advertising campaigns that emphasise trust, privacy, and convenience, aligning with the expectations of Generation Z (Hossain et al., 2023). Policymakers, meanwhile, can focus on improving digital infrastructure and promoting privacy-compliant initiatives to create a supportive environment for mobile tourism growth (UNWTO, 2023).

Finally, while this study makes significant contributions, it highlights the need for further research to address its limitations and explore emerging technologies and consumer behaviours. Expanding the research to diverse demographic groups and geographic regions can improve the applicability of the findings, while examining the influence of technological advancements can provide deeper insights into the evolving landscape of mobile tourism adoption (Gretzel & Koo, 2021). Through continued investigation, researchers and stakeholders can develop more effective strategies to meet the dynamic needs of Generation Z and drive innovation in the tourism industry.

From a theoretical standpoint, this study advances mobile tourism literature by integrating TAM and UTAUT into a unified framework, moderated by privacy concerns. This combination addresses prior limitations of each model in isolation and provides a holistic view of Gen Z's mobile tourism behaviour. By introducing privacy concerns as a moderator, the model also responds to an emerging research need to account for trust and risk in technology acceptance studies. This integrative approach contributes new insights into how internal beliefs and external contexts, alongside data security considerations, shape the behavioural intentions of digital native consumers in tourism.

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Exploring loneliness and social media addiction: Key drivers of phubbing behaviour

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ABSTRACT

In an age where digital communication dominates, smartphones have transformed human interaction, blurring the lines between personal and professional lives and creating a paradox; while technology fosters connectivity, it may also diminish authentic human interactions. This has contributed to the rise of phubbing (phone snubbing), a problematic behaviour with adverse psychological and social consequences. This research explores the relationships between loneliness, social media addiction, and phubbing behaviour among young adults in Malaysia, utilising the Compensatory Internet Use Theory. A quantitative approach was employed, using an online survey questionnaire to gather data from 80 Malaysian respondents aged 18 to 40 with active social media accounts. Data analysis using SmartPLS 4 reveals significant negative relationships between both loneliness (path coefficient = -0.35 , $p = 0.007$) and social media addiction (path coefficient = -0.313 , $p = 0.003$) and phubbing. These findings suggest that higher levels of loneliness and social media addiction are associated with lower levels of phubbing, potentially due to lonely individuals prioritising direct social interactions and those with social media addiction withdrawing from social settings. The research offers insights into these complex relationships and emphasises the need for further investigation to inform interventions aimed at promoting healthier digital habits.

Keywords: **Phubbing, loneliness, social media addiction, digital communication, online interaction**

INTRODUCTION

In an age where our thumbs do more talking than we do, the digital world has irrevocably transformed the way humans connect with one another. The omnipresence of smartphones has blurred the lines between personal and professional lives, creating a paradoxical reality; while fostering unprecedented connectivity, technology has also contributed to a decline in authentic human interactions. As of January 2025, Malaysia recorded a smartphone penetration rate of 99.3%, with over 25.1 million active social media users. This figure is equivalent to 70.2% of Malaysia's total population at the start of 2025 (Kemp, 2025). The widespread smartphone usage has facilitated seamless connectivity but has also contributed to the rise of problematic behaviours such as phone snubbing or phubbing—the act of ignoring someone in favour of using a smartphone. Phubbing has been linked to adverse psychological and social consequences, including reduced relationship satisfaction, diminished mental well-being, and increased social isolation (Garrido et al., 2024).

Phubbing is increasingly recognised as a breach of social etiquette, leading to negative perceptions of disrespect and emotional detachment. It disrupts expectations of interpersonal trust, empathy, and meaningful social engagement (Afdal et al., 2019). Furthermore, research suggests that phubbing not only affects the ignored individual but also has psychological repercussions for the phubber, fostering a cycle of social disconnection and dissatisfaction (Chotpitayasunondh & Douglas, 2016).

Research indicates that the effects of phubbing are influenced by an individual's unpleasant feelings (Garrido et al., 2024). As a result of such feelings, it prompts them to seek escape strategies. Smartphones and social media platforms offer an accessible means of distraction, making them an ideal avenue for such escape, resulting in phubbing. Among the psychological drivers of phubbing behaviour, loneliness and social media addiction have emerged as particularly salient factors. Hence, this research explores the intricate relationship between these independent variables—loneliness and social media addiction—and phubbing behaviour. Given social media's widespread reach (Mohamad Yusuf, et al., 2022), and the high engagement of digital generations (Jun & Firdaus, 2023), the focus on youth in this research is particularly relevant, as they are the most active users of these platforms.

The selection of these two variables is grounded in both theoretical and empirical justification. Loneliness has been extensively studied in relation to digital dependency, with findings suggesting that individuals experiencing loneliness seek refuge in online interactions as a means of social compensation (Cacioppo & Cacioppo, 2018). This aligns with the Compensatory Internet Use Theory, which posits that individuals turn to digital platforms to cope with unmet emotional and social needs (Kardefelt-Winther, 2014). Social media addiction, on the other hand, reflects a compulsive need for digital engagement, often at the expense of real-world interactions. Research has consistently linked excessive social media use to increased phubbing behaviour, reinforcing the idea that digital addiction is a significant contributor to social withdrawal (Jun & Firdaus, 2023; Karadağ et al., 2015).

Although loneliness and social media addiction are well-documented factors influencing phubbing, existing research has yet to comprehensively examine their

combined effects, particularly within the Malaysian context. By addressing this gap, the present research aims to contribute to the growing body of literature on digital dependency and interpersonal communication.

THEORETICAL BACKGROUND

Compensatory internet use theory

The relationship between loneliness, social media addiction, and phubbing can be effectively explained using the Compensatory Internet Use Theory (CIUT). CIUT posits that individuals turn to online activities, including social media, to cope with negative emotions or unmet needs, such as loneliness. Loneliness drives people to seek solace in social media, which can lead to compulsive use (addiction) and phubbing behaviours as they prioritise online connections over face-to-face interactions. This creates a cycle where phubbing exacerbates loneliness, reinforcing the need for compensatory online engagement.

Kardefelt-Winther (2014), who highlighted how problematic internet use serves as a response to offline difficulties underscores how loneliness drives social media addiction and phubbing to compensate for real-world disconnection. Loneliness can stem from various factors, including social isolation, lack of meaningful relationships, or negative life events. To alleviate these feelings of isolation, individuals may turn to the internet as a means of social connection and emotional escape. In essence, loneliness can trigger compensatory internet use, leading to social media addiction and phubbing behaviour.

LITERATURE REVIEW

Relationship between loneliness, social media addiction and phubbing

Recent studies highlight the complex relationship between loneliness, social media addiction, and phubbing, emphasising how these factors are interconnected through psychological mechanisms. Xu et al. (2022) demonstrated that loneliness plays a mediating role between peer phubbing and mobile social media addiction among adolescents. The research found that loneliness partially explains why peer phubbing contributes to increased social media addiction, with gender differences influencing the intensity of these effects, particularly among girls.

Another research by Karaman and Arslan (2024) examined how social media addiction is a key driver of phubbing behaviour, linking unmet psychological needs like belongingness and loneliness to increased phubbing tendencies. It found significant positive correlations between social media addiction and phubbing, emphasising the role of digital engagement in coping with emotional discomfort. The psychological implications of social media addiction are profound. Studies have shown that individuals who are addicted to social media often exhibit symptoms like those of substance abuse disorders, including withdrawal symptoms when not using social media (Kuss & Griffiths, 2011). This addiction can create a cycle of dependency, where individuals prioritise online interactions over meaningful face-to-face connections, ultimately leading to feelings of loneliness and isolation (Primack et al., 2017).

Together, these studies suggest that loneliness can intensify reliance on social media, which in turn fosters phubbing behaviours as a form of escapism, aligning with the Compensatory Internet Use Theory (Kardefelt-Winther, 2014).

Relationship between loneliness and phubbing

The relationship between loneliness and phubbing has attracted growing interest, particularly in the context of increasing smartphone dependence. Additionally, other researchers have examined the relationship between phubbing and psychological factors. For instance, research by Błachnio et al. (2021) suggests that phubbing may be a way of coping with feelings of loneliness, worry, and anxiety, indicating that individuals might turn to their smartphones as a form of social compensation. While smartphones provide instant connectivity, they may also contribute to a paradoxical effect—heightening feelings of loneliness by replacing meaningful face-to-face interactions with superficial digital engagement (Yang et al., 2022).

Recent studies emphasise the bidirectional relationship between loneliness and phubbing, suggesting that individuals who experience loneliness are more likely to engage in phubbing, which in turn exacerbates their sense of isolation. For instance, Wang et al. (2023) found that individuals with high levels of loneliness were more prone to phubbing behaviours, often using their phones as an escape from social discomfort. However, this tendency to prioritise virtual interactions over real-life connections can create a reinforcing cycle where phubbing further alienates friends and family, intensifying feelings of loneliness (Lai et al., 2025).

Supporting this perspective, Joel and Vijayalakshmi (2020) highlighted that individuals with social anxiety may prefer indirect communication methods such as texting, while those experiencing loneliness are more likely to engage in solitary smartphone activities like browsing the internet or gaming. These behaviours, often linked to phubbing, contribute to further social withdrawal and emotional distress. Similarly, a research by Bajwa et al. (2023) examined the relationship between smartphone addiction and phubbing behaviour among university students. The findings indicate that smartphone addiction is positively linked to phubbing behaviour, with loneliness acting as a moderator in this relationship. This suggests that individuals experiencing loneliness may be more susceptible to smartphone addiction, which in turn can lead to increased phubbing behaviour, potentially reducing social satisfaction.

Relationship between social media addiction and phubbing

Social media has significantly reshaped interpersonal communication, offering both benefits and drawbacks. One concerning consequence is social media addiction, which is characterised by excessive engagement with social networking sites to the extent that it disrupts daily functioning and interpersonal relationships (Banyai et al., 2017). Defined as a behavioural addiction, social media addiction manifests through compulsive platform use, an inability to regulate screen time, and withdrawal symptoms when access is restricted (Kircaburun et al., 2020). This overreliance on social media has been linked to anxiety, depression, and low self-esteem, contributing to maladaptive social behaviours, including phubbing (Yang et al., 2022).

The compulsive urge to stay connected online often comes at the expense of face-to-face interactions, reinforcing phubbing tendencies. Recent studies indicate that individuals

with high social media addiction scores are more likely to prioritise digital engagement over in-person communication, leading to neglect of social relationships (Wang et al., 2023). As individuals become increasingly preoccupied with online interactions, they are more likely to engage in phubbing, further diminishing the quality of their real-world relationships (Lai et al., 2025). This aligns with previous findings by Karadag et al. (2016), who identified excessive and unregulated social media use as a major driver of phubbing behaviours.

Recent research has also highlighted personality traits that mediate the link between social media addiction and phubbing. Studies suggest that individuals high in neuroticism and impulsivity are particularly vulnerable to developing addictive social media habits, which in turn increase their likelihood of phubbing others (Yang et al., 2023). Furthermore, social media platforms' design—featuring endless scrolling, push notifications, and algorithm-driven engagement—reinforces compulsive usage patterns that contribute to phubbing.

Understanding these dynamics is crucial for developing interventions aimed at reducing phubbing behaviours among socially addicted individuals. Digital literacy programs, self-regulation strategies, and smartphone usage policies could help mitigate the negative effects of social media addiction on social interactions (Fioravanti et al., 2021).

Based on these reviews of past studies, this research formulated the following hypotheses.

H1 There is a significant relationship between loneliness and phubbing.

H2 There is a significant relationship between social media addiction and phubbing.

Figure 1 shows the framework of this research.

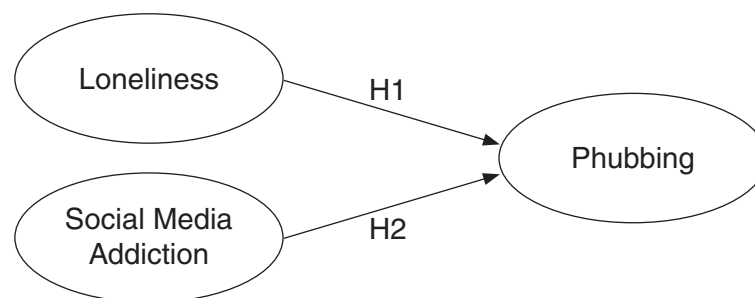


Figure 1. Research framework

Conceptualising loneliness

Loneliness has been described by Russell et al. (1980) as thoughts and feelings associated with isolation and disconnection from others. It is a complex emotional state characterised by a perceived lack of social connections. It can lead to various negative outcomes, including mental health issues such as depression and anxiety (Cacioppo & Cacioppo, 2018). The rise of digital communication has paradoxically increased feelings of loneliness, as individuals may feel more disconnected despite being constantly connected online (Twenge et al., 2019).

Conceptualising social media addiction

Turel and Serenko (2020) stated that social media addiction can be loosely conceptualised as a psychological dependency on the use of social media that can affect other more imperative events (Leong et al., 2019). More precisely, it is referred as “being overly concerned about social media, driven by an uncontrollable motivation to log on to or use social media, and devoting so much time and effort to social media that it impairs other important life areas” (Andreassen et al., 2016).

Conceptualising phubbing

The term phubbing is derived from the words phone and snubbing and refers to individuals accessing their smartphone amid a real-life interaction with someone else and escaping from interpersonal contact (Karadag et al., 2015). It was first introduced by Roberts and David (2016) in their research on the impact of mobile phone use on interpersonal relationships. They defined phubbing as the act of ignoring someone in favour of a mobile device, which can lead to feelings of neglect and resentment among those being snubbed. It may be called an insensitive act towards others and can impair real-life social ties with others (Balta et al., 2020). Subsequent research has shown that phubbing is prevalent in various social settings, including family gatherings, romantic relationships, and friendships (Kardaras, 2016).

METHODOLOGY

Research design

This research employed a quantitative approach using a survey questionnaire as the primary research method. The survey was chosen for its cost-effectiveness and efficiency in collecting responses from the target population within a limited timeframe (Chan et al., 2020; de Leeuw, 2008). To examine the relationships among the variables, a correlational research design was utilised. This approach aims to identify and analyse relationships between variables, providing insights into how current data trends might predict future patterns. Specifically, this research seeks to measure the correlations between loneliness, social media addiction, and phubbing, exploring how these factors interrelate within the population studied.

Population and sampling procedures

A non-probability sampling technique was employed to determine the sample size for this research, a common approach in online surveys (Cornesse & Blom, 2023). The respondents were selected through a combination of purposive sampling and snowball sampling. This integrated approach ensures that the respondents accurately represent the target population for the research. Purposive sampling, also known as judgmental or selective sampling, involves the deliberate selection of respondents based on the researcher’s judgment. It allows researchers to focus on specific individuals that are chosen purposefully rather than randomly, ensuring alignment with the research’s goals.

Snowball sampling, by contrast, is a chain-referral technique often used in sociology and statistical research to reach hidden or hard-to-access populations (Sharma, 2017). In this approach, current respondents help recruit additional respondents from their

social networks. This creates a “snowball” effect, gradually expanding the sample size until sufficient data is collected for analysis. The combination of these methods facilitates robust data collection while targeting a precise and representative sample.

In brief, purposive sampling refers to respondents with specified characteristics that meet the need to represent the population, whereas the snowballing procedure is utilised in the purposive sampling to achieve the research objectives. Screener questions were set to ensure that the respondents were Malaysian youths aged between 18 and 40, a smartphone user and have at least one active social media account during the period of the survey.

A sample size of 80 respondents was selected as part of a pilot test for the larger research. The pilot test was crucial in refining survey items and ensuring the reliability of the measurement scales before proceeding with a larger, more representative sample. Hence, with 80 valid responses, the current sample was deemed suitable for statistical analysis. This aligns with Sekaran and Bougie’s (2016) recommendation that a sample size between 30 and 500 is appropriate for social science research (Chan et al., 2021).

Research instruments and measurements

Due to its bias-reducing nature, since there are no verbal and visual clues to influence the respondents, an online survey questionnaire was employed as the research instrument. It was divided into four sections. Questions in Section A were designed to collect the demographic profile of respondents such as gender, age, marital status, race, religion, education and occupation as well as their personal social media involvement. Apart from it, one item of an open-ended question was also included to comprehend the purpose of respondents’ usage of social media. Section B, on the other hand, measured the first independent variable, namely loneliness. Items from the De Jong Gierveld’s 11-item Loneliness Scale (Gierveld & Tilburg, 1999) were used to assess loneliness.

Meanwhile, Section C measured the second independent variable, namely social media addiction. Adapted from Young’s Internet Addiction Test (2009), this section measured the extent of social media addiction. The final component, Section D, consisted of questions about phubbing behaviour. Items from the Partner Phubbing Scale (David & Roberts, 2020) were utilised to evaluate phubbing tendencies. The survey questions were bilingual, namely in Bahasa Melayu and English. It was measured using a 7-point Likert-type scale. In Sections B and D, the scale ranged from 1 (Strongly Disagree), 2 (Disagree), 3 (Slightly Disagree), 4 (Neither Agree nor Disagree), 5 (Slightly Agree), 6 (Agree) and 7 (Strongly Agree). Meanwhile for Section C, the values ranged from 1 (Never), 2 (Rarely), 3 (Occasionally), 4 (Sometimes), 5 (Frequently), 6 (Usually) and 7 (Everytime). This design ensured comprehensive data collection across multiple dimensions.

Data collection procedure

Data was collected through an online survey administered via Google Forms over four weeks in August 2024. The questionnaire link was distributed through WhatsApp groups and social media platforms such as Instagram and Facebook. The questionnaire was distributed until the targeted sample was achieved. Respondents participated voluntarily, and informed consent was obtained before proceeding with the survey. Ethical considerations included confidentiality and anonymity.

Reliability and validity test

The reliability and validity of the measurement scales for loneliness (LN), phubbing (PB), and social media addiction (SM) were assessed using SmartPLS 4. The results, summarised in Table 1, include Cronbach's alpha, composite reliability (ρ_a and ρ_c), and average variance extracted (AVE).

Table 1. Reliability and validity test results

Construct	Cronbach's alpha	Composite reliability (ρ_a)	Composite reliability (ρ_c)	Average variance extracted (AVE)
LN	0.673	0.851	0.736	0.447
PB	0.855	0.868	0.891	0.542
SM	0.573	0.654	0.756	0.515

Based on Table 1, phubbing demonstrated strong reliability (Cronbach's alpha = 0.855, composite reliability > 0.8) and acceptable convergent validity (AVE = 0.542). Loneliness showed acceptable reliability (composite reliability > 0.7) but marginal Cronbach's alpha (0.673) and low AVE (0.447), suggesting potential validity issues. Social media addiction presented reliability concerns with low Cronbach's alpha (0.573) and mixed composite reliability, though its AVE (0.515) was acceptable. While the phubbing scale is robust, the loneliness and social media addiction scales need refinement. Researchers should review item clarity, assess factor loadings, and consider revisions to improve reliability and validity.

FINDINGS

Table 2 presents the sample characteristics of this research. The sample primarily consisted of young adult females (81.2%), indicating that women are more active users of social media platforms. The majority of respondents fell within the 31–40 age group (48.8%), a demographic known for its heavy reliance on technology. While the sample is predominantly Malay (96.3%) and single (52.5%), it is important to note the diversity in educational attainment, ranging from SPM/STPM (10%) to Master/PhD (25%). WhatsApp (97.5%), Instagram (93.8%), and TikTok (83.8%) emerged as the most popular platforms among the respondents. This preference aligns with the trends observed globally, where these platforms have gained significant traction, especially among younger generations. The dominance of these platforms suggests a strong inclination towards visual and interactive content.

The primary purpose of social media use among the respondents is communication with others (22.5%), followed by information/news seeking (15%) as well as for work/business purposes (10%). This finding highlights the multifaceted nature of social media, which serves as a tool for both personal and professional use. Additionally, a significant proportion of respondents utilised social media for leisure (10%) and entertainment (9%), indicating its role in relaxation and stress relief.

Table 2. Sample characteristics (n = 80)

Socio-demographic details		n	%
Gender	Male	15	18.8
	Female	65	81.2
Age	18 – 20 years old	5	6.2
	21 – 30 years old	36	45.0
	31 – 40 years old	39	48.8
Marital status	Single	42	52.5
	Married	38	47.5
Race	Malay	77	96.3
	Indian	3	3.7
Education	SPM / STPM	8	10.0
	Diploma/Degree	51	63.8
	Master/PhD	20	25.0
	Others	1	1.2
Social media platform use	WhatsApp	78	97.5
	Instagram	75	93.8
	TikTok	67	83.8
	Telegram	62	77.5
	Facebook	60	75.0
	Twitter / X	10	12.5
	YouTube	2	2.5
	LinkedIn	2	2.5
	Pinterest	2	2.5
	Thread	1	1.3
	Tumblr	1	1.3
	Weverse	1	1.3
Purpose of using social media	Communication with others	18	22.5
	Information / Knowledge	15	18.7
	News / Trends	15	18.7
	Work / Business purpose	10	12.5
	Leisure / Stress release	10	12.5
	Entertainment	9	11.3
	Sharing update	2	2.5
	Shopping	1	1.3

All respondents met the criterion of maintaining at least one active social media account, ensuring their relevance to the research topic. The data were analysed using SmartPLS 4 to uncover pattern and relationship between variables.

This research sought to examine the intricate relationships between loneliness, social media addiction, and phubbing among Malaysian youths. The findings offer valuable insights into how these variables are interrelated within a demographic increasingly dependent on digital communication and online platforms. By analysing the correlations between these behaviours and emotional states, the study aims to enhance the understanding of their dynamics within the context of modern social interactions.

Regression analysis (path coefficients)

This section presents the results of the regression analysis conducted using SmartPLS 4 to examine the relationships between loneliness (LN), phubbing (PB), and social media addiction (SM). The results, summarised in Table 3, include the path coefficients (mean),

standard deviations, t-statistics, p-values, and the decision regarding the support of the hypothesised relationships.

Table 3. Regression analysis result

Construct	Mean	Standard deviation (STDEV)	t	p	Decision
LN → PB	−0.35	0.13	2.444	0.007	Supported
SM → PB	−0.313	0.108	2.703	0.003	Supported

The analysis revealed statistically significant negative relationships between both loneliness and social media addiction and phubbing. The path coefficient for LN → PB was −0.35 ($p = 0.007$), indicating that higher levels of loneliness are associated with lower levels of phubbing. This relationship was statistically significant, suggesting that loneliness is a significant negative predictor of phubbing. Recent research has shown that individuals experiencing loneliness might prioritise face-to-face interactions when available, potentially reducing phubbing behaviour (Choi & Lee, 2021).

The path coefficient for SM → PB was −0.313 ($p = 0.003$), demonstrating that higher levels of social media addiction is also associated with lower levels of phubbing. This relationship was also statistically significant, indicating that social media addiction is a significant negative predictor of phubbing. This is somewhat counterintuitive, as social media addiction is often linked to increased phone usage and potential detachment from physical surroundings. However, it might also suggest that individuals addicted to social media prioritise their online interactions over immediate, physical social interactions, thus reducing phubbing behaviour (Lin et al., 2022).

DISCUSSION

The regression analysis revealed a counterintuitive finding: both loneliness and social media addiction were significant negative predictors of phubbing. This suggests a complex interplay between these variables, warranting further investigation to elucidate the underlying mechanisms.

Compensatory internet use theory (CIUT)

The compensatory internet use theory (CIUT) proposes that individuals use the internet, including social media, to compensate for deficits in their offline lives, such as social isolation or loneliness. In this context, the negative relationship between loneliness and phubbing could be explained through CIUT. Individuals experiencing loneliness might intensely seek online social interactions, prioritising digital connections over immediate physical surroundings. This behaviour would lead to reduced instances of phubbing in face-to-face interactions because those interactions would be deemed as less important than the digital interactions they pursue. In line with CIUT, they might use social media not merely as a passive escape but as an active tool to fulfil unmet social needs, thereby reducing the need for phubbing.

CIUT also supports the idea that individuals with a strong social media addiction may withdraw from real-world interactions to immerse themselves in online environments, thereby compensating for perceived social deficiencies. This withdrawal could manifest

as avoidance of social situations where phubbing occurs, aligning with the negative association found.

Loneliness and phubbing

Contrary to prior research suggesting that loneliness is linked to increased phone use, including phubbing (Chotpitayasunondh & Douglas, 2016), this research found a negative relationship between loneliness and phubbing. This suggests that lonelier individuals may engage in less phubbing, possibly due to reduced social interactions (Wang et al., 2023). An alternative explanation is that lonely individuals may prefer asynchronous digital communication, such as social media or texting, rather than engaging in real-time phubbing behaviours (Balta et al., 2020). Additionally, some research indicates that lonely individuals might seek social connections through their phones but still prioritise face-to-face interactions when available to alleviate their loneliness (Kim & Park, 2020). Future research should explore whether loneliness is associated with passive phone use, such as scrolling or consuming content, rather than active phubbing.

It is also important to consider the bidirectional nature of the loneliness-phubbing relationship. Frequent phubbing may contribute to increased feelings of loneliness by diminishing meaningful social interactions and reinforcing social isolation. This highlights the need for interventions that reduce phubbing behaviours, as they may help mitigate loneliness and enhance overall well-being (Darcin et al., 2016). Further studies should examine the long-term effects of phubbing on loneliness, considering contextual factors such as social settings and individual coping mechanisms.

Social media addiction and phubbing

Surprisingly, social media addiction was negatively associated with phubbing, contradicting prior research that has consistently linked excessive social media use with increased phubbing behaviour (Davey et al., 2018). A potential explanation for this unexpected finding is that individuals highly addicted to social media may prioritise online interactions over in-person communication, leading them to withdraw from face-to-face social settings rather than engage in direct phubbing. Instead of splitting their attention between real-life conversations and their devices, they may entirely disengage from physical interactions in favour of immersive online engagement.

Another possible reason for this negative relationship is that individuals with high social media addiction might exhibit avoidance behaviours, preferring to isolate themselves to engage deeply with digital platforms, rather than participate in social settings where phubbing typically occurs. This aligns with research suggesting that social media addiction can contribute to social withdrawal, where individuals reduce real-world interactions and instead dedicate their time to virtual connections (Wang et al., 2019). In such cases, rather than exhibiting phubbing behaviours by ignoring conversational partners, they may avoid these situations altogether, thereby reducing opportunities for phubbing.

Additionally, the specific context of this research and the way phubbing was measured may have influenced these findings. Prior research has explored how problematic smartphone use impacts social interactions in different settings, with some studies indicating that the effects of excessive phone use vary depending on the environment and the individual's motivations (Garcia & Rodriguez, 2023). It is possible that respondents in this research engaged with social media in ways that did not involve direct phubbing

behaviours, such as consuming content in private or interacting primarily in solitary settings.

Furthermore, this result aligns with studies suggesting that social media addiction does not always translate to increased smartphone use during social interactions (Elhai et al., 2017). Some individuals addicted to social media might use their devices primarily when alone rather than in social environments where phubbing is typically observed. This behaviour contrasts with the assumption that high social media usage necessarily leads to higher rates of social neglect during in-person conversations. Future research should explore the nuances of social media addiction and its impact on different types of digital engagement, considering how individuals navigate their online and offline interactions.

Limitations and future directions

This research provides valuable insights into the relationship between loneliness, social media addiction, and phubbing. However, several limitations should be considered, and future research should address these gaps to enhance our understanding of these complex behaviours.

The relatively small sample size of 80 respondents may limit the statistical power of the findings, potentially reducing the ability to detect small but meaningful effects. Additionally, the research was conducted within a specific population, which may not be fully representative of broader demographic or cultural groups. The influence of cultural norms, social expectations, and smartphone usage patterns may differ across contexts, warranting further research using larger and more diverse samples to improve generalisability.

Measurement challenges may also have influenced the findings, particularly the unexpected negative relationships observed in the regression analysis. It is possible that respondents interpreted phubbing differently or that the survey items did not fully capture the complexities of their behaviours. Additionally, social media addiction and phubbing are conceptually intertwined, which may have led to some overlap in measurement. Future research should refine the scales used in such studies by incorporating qualitative insights, validating measurement tools across different populations, and distinguishing between passive and active forms of smartphone engagement.

Another limitation lies where this research did not account for potential mediating or moderating variables that may influence the relationship between loneliness, social media addiction, and phubbing. Factors such as social anxiety, self-esteem, and personality traits could play a role in shaping these behaviours. Incorporating these variables in future research could provide a more comprehensive model explaining phubbing tendencies.

Next, the cross-sectional nature of this research limited the ability to determine causality. While the findings establish associations between loneliness, social media addiction, and phubbing, it remains unclear whether loneliness leads to increased phubbing or whether frequent phubbing contributes to heightened feelings of loneliness. Longitudinal studies that track respondents over time would provide a clearer understanding of how these behaviours evolve. Experimental research could further strengthen causal claims by manipulating key variables and assessing their direct effects on phubbing tendencies.

Beyond individual behaviours, the role of social media platform design in reinforcing phubbing tendencies deserves attention. Features such as push notifications,

infinite scrolling, and algorithm-driven content engagement may contribute to compulsive smartphone use, making it difficult for individuals to disengage from their devices during social interactions. Future research should explore how specific platform mechanics influence phubbing and whether digital interventions—such as customisable notification settings and digital well-being tools—can help mitigate excessive engagement.

As technology continues to evolve, new digital trends may further shape phubbing behaviours. The increasing integration of augmented reality (AR), artificial intelligence (AI), and metaverse-based social interactions may redefine how individuals balance online and offline communication. Future research should examine how these emerging technologies influence social connectivity and whether they exacerbate or alleviate phubbing behaviours.

Despite these limitations, this research offers a valuable foundation for understanding the interplay between loneliness, social media addiction, and phubbing. Addressing these challenges through improved measurement, diverse sampling, longitudinal analyses, and intervention-focused research will contribute to a more comprehensive understanding of phubbing behaviour and inform strategies to foster healthier social interactions in an increasingly digital world.

CONCLUSION

In conclusion, this research investigated the intricate relationships between loneliness, social media addiction, and phubbing behaviour among young adults, a demographic heavily engaged with digital platforms. The findings reveal significant negative associations between both loneliness and social media addiction and phubbing, challenging previous research that often posits a positive link. The research's results suggest that higher levels of loneliness may prompt individuals to prioritise direct social interactions (either face-to-face or online), potentially reducing phubbing behaviour. Additionally, individuals with social media addiction might exhibit social withdrawal or prioritise immersive online engagement over in-person interactions, leading to decreased phubbing in physical settings. These interpretations highlight the complex interplay between these variables and underscore the need for further research to clarify the underlying mechanisms.

To build upon these findings, future research should adopt longitudinal designs to explore causality and the temporal dynamics between loneliness, social media addiction, and phubbing. Employing mixed methods approaches, including qualitative inquiry, could provide a more nuanced understanding of individual experiences and contextual factors influencing these behaviours. Furthermore, interventions aimed at fostering healthier digital habits and promoting meaningful social interactions should be developed and evaluated, drawing upon the insights gained from this research.

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From clicks to doorstep: Exploring service quality and stakeholder challenges in the online food delivery supply chain

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ABSTRACT

The rapid expansion of digital platforms has significantly transformed the food delivery sector in recent years. This growth has resulted in numerous benefits, such as increased convenience for consumers and new business opportunities for restaurants. However, as the food delivery industry continues to evolve, various stakeholders including delivery providers, restaurants, and customers face considerable challenges in ensuring efficiency, reliability, and overall satisfaction throughout the supply chain. The objectives of this study are two-fold: (1) to assess how customers perceive the service quality and customer support of online food delivery platforms based on reviews from the past year, and (2) to investigate the challenges faced by online food delivery providers, restaurants, and customers. The study included a sample of 16 stakeholders, comprising customers, restaurant owners, and delivery riders, selected through purposive sampling. A qualitative research approach was employed, utilising in-depth interviews to gather data and gain a comprehensive understanding of the stakeholders' perspectives, experiences, and complaints. Data analysis was conducted using the NVivo 12 software. The challenges identified are categorised into four themes: technology and communication apps, time pressure, service quality, and competitive dynamics. The study suggests that the challenges faced by online food delivery services can be addressed and improved through cooperation and communication among stakeholders. By tackling these challenges and leveraging available opportunities, benefits can be extended to all stakeholders, including online food delivery providers, restaurants, customers, and the broader food and logistics industries. This research offers valuable insights into the dynamics of the online food delivery supply chain and provides practical recommendations for fostering a more efficient and customer-centric system. By promoting mutual cooperation among stakeholders, the industry can achieve sustainable growth and improved service quality, ultimately enhancing the overall experience for everyone involved.

Keywords: *Online food delivery, supply chain, challenges, service quality, stakeholders*

INTRODUCTION

The online food delivery services supply chain is experiencing significant growth in Southeast Asia during this new era of a multifaceted transformation driven by technological advances, shifts in consumer behaviour post-pandemic, and evolving socio-political contexts (Statista, 2024). Technology has emerged as a significant factor behind the rise of online food delivery services, providing convenience to consumers to relish their meals at home while offering new revenue streams to restaurants and creating job opportunities for food riders.

The food industry is one of the rapidly expanding markets, and many retailers are now providing additional online services, such as online food delivery, to cater to their customers. According to Ageron et al. (2020), more than 90% of internet users have used online purchases, and about 40% of businesses have employed advanced big data analytics technologies.

Online food delivery services have emerged as a significant trend in the food and service industry, where customers can order food from restaurants or third-party logistics platforms through a website or mobile app. Many restaurants have now collaborated with third-party platforms like Food Panda, GrabFood, DeliverEat, Running Man Delivery, and FoodTime to expand their business and delivery capabilities across all their stores throughout the day, as observed by Li et al. (2020). The food industry, in particular, has embraced this idea enthusiastically, given food delivery applications is gaining popularity among Malaysian customers. These services provide convenience by making meal access easier for individuals with limited time to eat outside.

However, to sustain their business and retain their consumer base, online food delivery services must continuously enhance their service quality, streamline operational efficiency, and foster strong support from stakeholders. This is especially critical given that many stakeholders, including restaurant partners, delivery riders, and customers, face various challenges, such as fluctuating demand, increasing competition, and logistical hurdles. Additionally, young consumers' attitudes and purchasing behaviours regarding food products are evolving in the current millennium.

Online food delivery services have become popular due to their convenience, yet they continue to face persistent operational challenges that impact customer satisfaction. Common issues include late deliveries, order mix-ups, and poor communication with customers (Rawat, 2024). Food riders also face difficulties due to a lack of training and benefits. These problems not only affect service quality but also contribute to a growing number of negative reviews and customer complaints. Thus, online food delivery services must improve their systems, collaborate with restaurants, and train food riders to improve their delivery services and meet customers' expectations.

There is considerable existing research on online food delivery that focuses on customer satisfaction, including studies by Azman et al. (2021), Srichroen et al. (2024), and Shamsuddin et al. (2023). However, these studies are mainly quantitative and lack in-depth, contextual analysis, which is necessary to fully comprehend the complex challenges and lived experiences of the various stakeholders involved. To address these research gaps, this study adopted a comprehensive, multi-stakeholder approach, incorporating the perspectives of customers, restaurant owners, and delivery riders. By triangulating their viewpoints, the study aims to provide a deeper understanding of the operational

challenges faced in the food delivery supply chain. Therefore, this study aims to investigate the challenges faced by online food delivery providers and customers, evaluate the quality of food delivery services from both perspectives and propose opportunities for improving the online food delivery supply chain.

The study seeks to answer two main research questions (RQs) based on the previously discussed research background and problem statement. RQ1: How do customers perceive the online food delivery platform service quality and customer service based on insights from platform reviews over the past year? RQ2: What challenges do customers, business owners, and drivers face in using online food delivery platforms?

LITERATURE REVIEW

Online food delivery service

Online food delivery services have transformed how consumers access meals by integrating digital platforms with restaurant and logistics networks. These services, often delivered via mobile apps or websites, allow users to browse menus, place orders, and have food delivered to their doorsteps without face-to-face interaction (Dazmin & Ho, 2019; Ray et al., 2019). As a form of self-service technology, they represent a shift toward more autonomous and convenience-driven consumption (Pigatto et al., 2017). These platforms operate by facilitating real-time transactions between consumers, food providers, and delivery personnel, creating a digitally coordinated supply chain (Li et al., 2020). Understanding how these systems function is essential for assessing the service quality and challenges faced by all stakeholders involved, which is the focus of this study.

Convenience

Convenience has emerged as a key reason for the growing popularity of online food delivery services, particularly among working individuals managing busy lifestyles. Researchers have noted that the ability to avoid travel, long queues, and parking difficulties makes these services especially appealing (Das & Ghose, 2019; Salman et al., 2018). As digital platforms become more user-friendly and efficient, many consumers now prefer to order food online as a way to save time and reduce effort (Chai & Yat, 2019). The convenience factor is also linked to features such as easy price and menu comparisons, flexible payment methods, and simplified interfaces, which help users make quicker and more informed decisions (Prabowo & Nugroho, 2019; Rathore & Chaudhary, 2018).

The challenges of online food delivery services

Online food delivery services in Malaysia continue to grow in popularity, but they also face complex challenges involving multiple stakeholders, including third-party platforms, restaurants, consumers, and delivery riders (Chern & Ahmad, 2020). Key issues such as maintaining food quality, managing delivery during peak hours, and ensuring timeliness have been well-documented. While previous studies have acknowledged the logistical and coordination difficulties in such multi-actor systems (Chern & Ahmad, 2020; Saad, 2021), most studies have centred primarily on customer-facing outcomes. There remains limited exploration of how these operational challenges are experienced across the supply chain, particularly by restaurant partners and delivery riders.

Delivery timing

Service delivery requires time, and consumers value saving time in both online and offline shops (Vasic et al., 2019). While several studies (Md Rahim & Mohd Yunus, 2021; Vasic et al., 2019) emphasise the importance of on-time delivery, limited attention has been given to how delivery delays affect different stakeholders, particularly food delivery riders and restaurant partners within the supply chain. However, unforeseen events like Malaysian Movement Control Orders (MCOs) might delay food delivery. This gap highlights the need for a multi-stakeholder investigation, such as the one undertaken in this study.

Consumer satisfaction

E-commerce and online food delivery services have become increasingly popular, allowing customers to make purchases at any time and from anywhere using their mobile devices. Online food delivery services, which allow personalised menus or preferred menus, can reduce information overload and improve customer satisfaction (Deepak et al., 2020). While prior studies highlight the importance of meeting customer needs to ensure loyalty and business growth (Chotigo & Kadono, 2021), less attention has been given to the challenges faced by service providers and restaurants in fulfilling these expectations. The complexity of maintaining satisfaction lies not only in the customer-facing elements such as app functionality and food availability but also in the coordination between platforms, restaurants, and delivery riders. This study addresses this gap by exploring how satisfaction is shaped by both front-end user experience and back-end operational processes from a multi-stakeholder perspective.

Online delivery services platform

Food delivery services have evolved into restaurant-to-consumer delivery and platform-to-consumer delivery. The traditional delivery category is where food order aggregators take orders from consumers, route them to the restaurant, and handle the delivery process. In contrast, the latter is a new delivery trend in which platforms establish their own logistics network and partner with restaurants to provide delivery services, alleviating restaurants of delivery-related logistical concerns. Participating in third-party delivery platforms offers several benefits for restaurants, including new income and less/no worry about space or headcount. However, partnering with third-party platforms can also improve customer satisfaction by providing a broader range of options for customers to choose from and the convenience of having a single app for ordering food from various restaurants (Li et al., 2020).

Logistics

Logistics plays a crucial role in shaping both customer satisfaction and operational efficiency in online food delivery. While third-party platforms help restaurants cut internal costs, they also introduce coordination challenges. Real-time tracking has improved user experience (Saad, 2021), yet issues like rider shortages, traffic, and miscommunication still disrupt service quality (Chern & Ahmad, 2020). Past studies often focus on the customer side, overlooking how these logistics issues affect riders and restaurants—such as tight delivery windows and erratic pick-up times. This study addresses that gap by examining logistical challenges from multiple stakeholder perspectives, offering a more holistic view of service performance in the food delivery ecosystem.

Food delivery service quality

Service quality is crucial in online food delivery services, affecting consumer satisfaction and loyalty toward the service provider. Researchers have consistently identified key factors influencing perceived service quality, including menu variety, freshness, presentation, and food temperature (Namkung & Jang, 2007). Many studies employ the SERVQUAL model to assess the gap between customer expectations and actual service performance, focusing on dimensions such as reliability, responsiveness, assurance, empathy, and tangibles. Findings by Banerjee et al. (2019), for instance, reveal that service quality is perceived as lacking across all dimensions, underscoring the need for significant improvements. While these frameworks offer valuable insight into customer perceptions, much of the literature focuses narrowly on consumer views, with limited attention to how service quality is shaped and constrained by the experiences of other stakeholders, such as restaurant partners and delivery riders. Thus, this study offers a more holistic perspective on performance in the food delivery ecosystem.

METHODOLOGY

“Foodie-Fly” (a pseudonym) was chosen for this study because of its strong presence in Malaysia’s online food delivery market. With a large user base and wide reach, it offers a useful lens for examining service quality. Despite its popularity, users have raised concerns about delayed updates, poor order tracking, and unhelpful support. These issues risk damaging its reputation in a highly competitive market. By comparing “Foodie-Fly” with other platforms, this study highlights service gaps and offers practical suggestions to improve customer experience not just for “Foodie-Fly,” but for the industry as a whole.

To address RQ1, 74 social media reviews were analysed from the “Foodie-Fly” Facebook page to understand customer feedback. The platform was chosen due to its popularity in both rural and urban areas. Negative feedback offered valuable insights into the challenges customers encounter when using the service. This information was used to interpret the findings of the study and develop insights. To address RQ2, the study employed purposive sampling, which involves selecting participants who fit a specific category and can provide the desired information.

A total of 16 individuals were selected, comprising 10 regular customers, 3 restaurant partners, and 3 food delivery drivers. This sample size was deemed sufficient for achieving thematic saturation. This study determined thematic saturation was achieved after the 16th interview, when no new themes, codes, or patterns emerged from subsequent interviews. This approach aligns with the recommendations of Guest et al. (2006), who suggested that saturation often occurs within 12 to 16 interviews, particularly when participants share relatively similar experiences. Additionally, Braun and Clarke (2013) noted that thematic saturation is reached when further data fails to provide additional analytical value.

Customers who used the platform at least three times a week were chosen for their frequent engagement. Restaurant partners and riders with over a year of experience with “Foodie-Fly” shared practical insights into daily challenges. Each 30-minute interview was conducted with consent, transcribed, and manually coded. NVivo 12 supported the organisation and refinement of emerging themes.

RESULTS AND DISCUSSION

Food delivery service quality and customer service from the customer's perspective

To address RQ1, a content analysis was conducted on 74 reviews from social media platforms, specifically from the “Foodie-Fly” Facebook Page, covering the period from January 1, 2021, to November 30, 2021. Each customer review regarding service quality at “Foodie-Fly” was evaluated based on related contexts, including customer service and overall service quality. A descriptive analysis was done and found that a total of 28 customers reviewed and expressed their negative feedback related to customer services from “Foodie-Fly”. Customer service (CS) included three measurements, namely “CS 1a: Lack of training and knowledge of the staff”, “CS 1b: The issue of a refund” and “CS 1c: Comparison with other online food delivery apps”.

Table 1. Customer service measurement and service quality from “Foodie-Fly”

Customer Service Measurement	Frequency	Percentage (%)
CS 1a: Lack of training and knowledge of the staff	11	39.3
CS 1b: The refund issue faced by customers	10	35.7
CS 1c: Comparison with other online food delivery apps	7	25.0
	28	100.0
Service Quality Measurement	Frequency	Percentage (%)
SQ 1a: Functionality of apps	22	47.8
SQ 1b: Delivery timing	19	41.3
SQ 1c: Packaging and handling	5	10.9
	46	100.0

About 39.3% of customers reported poor service from “Foodie-Fly.” Most turned to the in-app chat box when facing issues but were met with automated replies. Though 24-hour support is offered, some said the agents did not understand their concerns due to language gaps, leaving problems unresolved. Another 35.7% were unhappy with the refund process. Despite a 14-day refund policy, delays were frequent, and lastly, some orders were cancelled last minute without notice by restaurants, riders, or the platform itself.

Many were frustrated when refunds came as vouchers instead of cash. In contrast, the competitor “Giga Big Food” was seen as more reliable, offering better support, punctual riders, and free delivery deals. Despite the complaints, the food delivery market continues to grow, leaving space for “Foodie-Fly” to improve and rebuild trust.

The customer's perspective on service quality was analysed and categorised into three measurements: “SQ 1a: Functionality of Apps,” “SQ 1b: Delivery Timing,” and “SQ 1c: Packaging and Handling.” A total of 22 customers (47.8%) expressed negative feedback regarding the functionality of the apps. “Foodie-Fly” is the first established online food delivery service in the market. Customers prioritise ease of use when it comes to apps. Many customers have noted that “Foodie-Fly” lacks the functionality to check order status or to lodge complaints about customer service. Additionally, two customers pointed out that the app operates very slowly; for instance, it often takes multiple attempts to search for a restaurant or food item. Furthermore, few customers mentioned that

“Foodie-Fly” does not display the rider’s identity, which is a feature offered by “Giga Big Food”. “Foodie-Fly” should identify the problems faced by customers and enhance the app’s functionality to improve user comfort and convenience.

While “Foodie-Fly” offers convenience, many customers are unhappy with delivery delays. Although they expect food to arrive within an hour, 19 participants (41.3%) reported waiting 1 to 2 hours especially during lunch and dinner. This was particularly frustrating for office workers who rely on timely meals. In some cases, delays were caused by slow order confirmation from restaurants. To meet expectations and keep customers loyal, “Foodie-Fly” must improve delivery speed and coordination.

Five customers (10.9%) provided feedback regarding the packaging of the food. Some restaurants did not pack the food properly, particularly when it comes to soups and drinks. This often leads to spills when the food is delivered to the customer’s doorstep. To address this issue, “Foodie-Fly” can communicate with restaurants to ensure that food is packed and handled with care, allowing customers to enjoy their meals at home. Additionally, these customers expressed concerns about how food was handled by the delivery riders. They noted that some riders do not pay attention to customers’ instructions and simply leave the food outside the door without any notification.

The challenges of online food delivery faced by stakeholders

To address RQ2, the study sampled and interviewed 16 participants: 10 customers who used the “Foodie-Fly” online food delivery services, 3 current restaurant partners with “Foodie-Fly,” and 3 food drivers for the platform. All data collected were transcribed in narrative form and uploaded into the NVivo 12 software database.

This study identified four main themes that capture the challenges of online food delivery services from the perspectives of key stakeholders. The analysis began with first-level coding, where initial codes were created by closely reading participants’ narratives. Similar codes were merged to reduce overlap and organise the data. In the next phase, these codes were grouped into smaller units to identify patterns, which were then developed into subthemes. These subthemes were further refined into overarching themes that reflect the core findings. As Creswell (2009) notes, this approach involves clustering codes into broader meanings. A summary of the themes and subthemes is presented in Table 2.

Table 2. Summary of the themes, sub-themes and codes in regard to challenges of online food delivery

Theme	Sub-Themes	Codes
Technology Communication Apps Inefficiency	Unanticipated System Responsiveness	Slow and unresponsive system
		Delayed customer service response
		Limited access to customer service before rider pickup
	Order Status Communication Issue	Unable to track order
		Late food cancellation notifications
	Transparency and Resolution Limitations	Lack of explanation for cancellations Unclear timeframe for refunds

Table 2. (con't)

Theme	Sub-Themes	Codes
Time Pressure	Resource Constraints and Overload	Not enough food riders to meet the demand
		Overburdened food riders handling several orders at the same time
		Delays in assigning food riders
	Operational Bottlenecks Environmental Factors	Late delivery due to high restaurant demand
		Restaurants contacting riders at the last minute
		Delivery time longer than estimated. Road conditions causing delivery delays Riders under time pressure to meet responsibilities
Service Quality	Food Quality	Undercooked food and wrong orders from the restaurant
		Spilled or damaged food and drinks due to delivery issues
	Communication and Feedback Processes	Negative comments and complaints posted in the app
		Lack of communication between business owners and customers
	Value for Money Perception	Expensive in apps compared to in-store Additional delivery fees despite higher prices
Competitive Dynamics	Work Flexibility and Employee Attractiveness	Fixed working hours and shift patterns
		Lack of flexibility in work hours compared to Giga Big Food
		Giga Big Food offering flexible working hours
	Cost and Pricing Challenges	High commission fees
		High promotion charges Customer complaints about higher prices

Theme 1: Inefficiency of technology communication apps

The analysis began with first-level coding, where the researcher identified meaningful patterns linked to the core question: “What challenges do customers, business owners, and drivers face when using online food delivery platforms?” Similar codes were merged to reduce overlap and improve clarity. A second round of coding then condensed these into more focused units. As Creswell (2009) described, this stage involves grouping codes into broader ideas. These were organised into subthemes and, through further abstraction, refined into overarching themes that capture the main findings of the study.

Here is an example that demonstrates code generation from transcribed data. From Participant 1, the codes generated during the coding process were “*slow and unresponsive system, delayed customer service response, and limited access to customer service before rider pickup*”.

Customers faced issues with Foddie-Fly's slow and unresponsive system, which did not allow them to track their orders or contact customer service until after the rider had picked up the food. The system was also slow, with messages to customer service taking 24 hours to receive a response. Multiple customers reported this issue.

(Participant 1)

The coding process derived the quote of “*unrealistic delivery time expectations, struggles with orders, and late delivery, which were attributed in part to the platform’s lack of real-time communication and failure to provide timely updates on delivery status*”, as highlighted by Participant 11 (business owner).

Customers may have unrealistic expectations for online food delivery, expecting fast delivery times despite potential challenges during peak hours or unexpected conditions. This can lead to delays in delivery due to high demand, weather conditions, and balancing with in-house orders, which result in confusion. Business owners may struggle to handle an influx of orders due to a lack of system communication features, resulting in late deliveries.
(Participant 7)

The code obtained from the statement made by Participant 3 includes a “*lack of explanation for cancellations and an unclear timeframe for refunds.*”

... Food cancellation notification is sent only 10 minutes before delivery time with no explanation and no timeframe for refund.
(Participant 3)

We conducted a second level of coding analysis to refine and merge the initial codes, forming thematic categories. In this process, we compared the meanings of each code to identify similarities, allowing us to combine them into specific themes. Our analysis focused on identifying patterns among the emerging codes, which helped us establish deeper themes and ultimately, create subthemes. We organised these subthemes into a hierarchical structure. From this analysis, we identified three main subthemes: unexpected system issues, order management issues, and delivery issues. These subthemes highlight common challenges faced by users of online food delivery platforms, particularly relating to system inefficiency, delayed customer responses, and lack of transparency. Mai and Nguyen (2024) found that system and service quality significantly influence users’ trust in food delivery platforms, which in turn affect their continued usage intentions. Their study highlights the importance of reliable and responsive systems in building user trust and ensuring sustained engagement with the platform.

Based on these findings, improving the “Foodie-Fly” app is crucial for retaining customers. Respondents suggested a feedback section and refund function, display of food images, as well as improved speed and security. The latest software should be invested to improve order processing times and location tracking. Multiple payment options, such as credit cards and e-wallets, minimise the risk of fraud. Further, contactless payment methods also enhance customer security and convenience.

Theme 2: Time pressure

Time is a valuable resource, often in short supply for consumers. Customers may be unwilling to wait long for their meals due to factors like restaurant peak periods, high order volumes, or system errors that prevent orders from being processed effectively. Restaurant owners have identified capacity as their biggest challenge. During peak times, such as lunch and dinner, they must serve both dine-in customers and online orders

simultaneously. Preparing food takes time, and when a large number of orders come in at once, it can be difficult for them to fulfil all of them promptly.

...Foodie-Fly does not provide enough food riders to deliver the food. Some of the food riders need to handle too many at once due to the food rider need to accept the order from the system and causing the late deliveries to happen.

(Participant 12)

As a food rider, the most challenging part is the order pick up from the restaurant. Sometimes, due to the high demand of restaurants, they are unable to fulfil the order on time cause the late deliveries happened.

(Participants 14 &15)

The limited availability of food riders is another challenge faced by restaurants using “Foodie-Fly”’s delivery service. This can lead to delays in delivering prepared food to customers. As Foodie-Fly is not responsible for finding and contacting food riders, it falls on the restaurant to ensure there are enough riders available in the area to fulfil orders promptly. This highlights the need for a reliable and sufficient pool of food riders to support the online food delivery industry.

...Sometimes, we faced the availability of food riders. When we prepare food, the system does not assign the food riders to pick it up; we need to find and contact the food riders ourselves at the last minute; it is not fair for us as we had paid the fees to Foodie-Fly.

(Participant 12)

Moreover, most of the respondents pointed out that the biggest challenge of online food delivery services is the delivery time. Most of the respondents’ feedback was that the delivery time is much longer than the estimated time shown in the apps. For example, customers can track the estimated time for the status of the preparation of food, handling to food rider, and delivery to the doorstep. Unfortunately, they encounter late deliveries, which always happens.

Sometimes, the delivery time is longer than expected and they do not allow customers to cancel their order. For example, I ordered one meal from “Foodie-Fly”, and when completed the order, it will show estimation arrival time of 30 minutes, but ended up I waiting for one and a half hours during lunch hour.

(Participants 4, 8, 9 & 10)

Furthermore, online food delivery services face various challenges due to unexpected circumstances. Respondents have pointed out that food riders often deliver food even during inclement weather as they need to support themselves and their families. However, this can lead to delays in delivery times as they need to drive more carefully and slowly to ensure safety. The food riders feel that delivering food in rainy weather is particularly challenging as it affects their visibility, and they need to be extra cautious about road conditions. Therefore, they hope customers can understand the potential delays during such weather conditions.

Even on rainy days, we still need to deliver the food to the customer's doorstep as it is our responsibility as food riders. Somehow, we are unable to predict the condition on the road, but we will deliver your food to the doorstep too due to income, please expect there might be some delay of the order.
(Participant 15)

These findings reflect the time-related challenges commonly experienced in online food delivery services, particularly during peak hours, rider shortages, and unpredictable weather conditions. Similar concerns have been raised in previous studies, where delivery time accuracy was found to be a critical determinant of customer satisfaction (Koay et al., 2022). Abed (2024) further emphasised that prolonged waiting times and delays often discourage customers from reusing delivery apps. Therefore, managing customer expectations and improving operational efficiency are crucial in addressing time pressure challenges faced by food delivery platforms.

Theme 3: Service quality

Ordering food online has become second nature for many because it is quick and convenient. However, service quality still leaves much to be desired. Participants in this study spoke of common frustrations such as poor packaging, delayed deliveries, wrong items, and customer service that felt unhelpful. Many of these issues can be attributed to restaurants overlooking customer notes or getting the order wrong. As Saad (2021) also observed, timely delivery, proper handling, and order accuracy are crucial to a positive experience. For customers, having to wait again for a corrected order only adds to their disappointment.

The biggest challenges I've faced are undercooked food and wrong orders from the restaurant, and spilled food or drinks due to issues with the app. For instance, I received an Americano instead of an iced latte and a destroyed cake with missing packaging.
(Participant 5)

Restaurants using online food delivery services like Foodie-Fly have limited control over the delivery process, which can affect food quality and customer satisfaction. Negative feedback and complaints can significantly harm a restaurant's reputation in the industry, leading to a decrease in customer confidence and reluctance to reorder.

Negative comments and complaints are sometimes posted directly in the app, leaving us unaware of what happened during delivery. We also receive phone calls from upset customers without knowing the full story.
(Participant 13)

Finally, pricing is a major challenge for online food delivery services, as the prices of food items on apps are often more expensive due to commission fees, additional charges, and delivery fees. Pricing issues, especially when customers perceive app prices to be higher than in-store prices, were also found to negatively affect customer trust and intention to reorder (Abed, 2023). This can cause concern for restaurant owners who

prefer to keep prices the same as in-store prices but are forced to mark up prices due to commission rates.

...the most challenge is the pricing offered in online food delivery services. The app price is much higher than the in-store price. With a higher price, I still need to pay the delivery fee.
(Participants 6, 9 & 10)

Theme 4: Competitive dynamics

This study identified an internal factor affecting online food delivery services: competition among food riders. The interviews with food riders highlighted that “Foodie-Fly” previously operated 24 hours a day in Kuala Lumpur but adjusted its hours after the Movement Control Order (MCO) was implemented in Malaysia. Food riders worked in shifts to complete orders, but some reported working 10 hours a day to earn a salary based on the number of orders they completed. Resting or working less than eight hours could negatively affect their performance rating and salary. As a result, many food riders sacrificed family time to work and earn a living.

Unlike Giga Big Food, our working hours are fixed at around 8 to 10 hours, and we have to follow the shift pattern. To earn more, most of us work for 10 hours, as our salary is based on the number of orders we complete. In contrast, Giga Big Food riders enjoy more flexibility, as they can choose to work whenever they want and are not bound by fixed hours or shift patterns.
(Participant 16)

Food riders’ earnings are not based on basic pay alone, they rely heavily on performance. Riders are ranked in batches depending on their working hours, order acceptance, and cancellation rates. Being in batch 1 means better pay, while falling into batch 2 results in lower earnings. Staying in the top tier requires timely deliveries and minimal cancellations. But this does not depend on riders alone, restaurant efficiency matters too. Delays in the kitchen can hurt a rider’s rating. In the end, successful food delivery depends on both parties working in sync.

In Malaysia, the online food delivery scene is largely led by “Foodie-Fly” and “Giga Big Food”. However, two customers in this study raised concerns about limited menu options and inconsistent promotions across platforms. Leanne (2021) noted that delivery apps charge restaurants commissions of 25% to 30%, often leading to higher menu prices online. Similarly, Yeoh (2021) observed that some restaurants now urge customers to order directly to avoid fees as high as 35%. While commission costs remain a major hurdle, the food delivery market continues to grow, offering more convenience for customers and opportunities for restaurants.

Partnering with “Foodie-Fly” comes with significant costs, such as commission fees and event promotion charges, resulting in lower revenue for us. Customer complaints about higher prices on the platform add to the challenge.
(Participant 12)

This study explored the challenges faced by customers, riders, and restaurants in the online food delivery space, focusing on service quality. Interviews in Penang showed that while convenience drives demand, unresolved issues and poor support affect satisfaction. For platforms like “Foodie-Fly” to stay competitive, both they and their restaurant partners must improve responsiveness. In a fast-paced world, reliability matters just as much as speed.

THEORETICAL AND MANAGERIAL IMPLICATIONS

This study identified several challenges faced by online food delivery services, including high delivery volumes during peak periods, maintaining food quality and safety, resource management, and logistical issues. However, the most significant challenge is delivery time. Timeliness is crucial for consumers, who expect meals to be delivered quickly and conveniently, as online food delivery services are designed to bring food directly to their doorsteps. This expectation poses a constraint for online food delivery providers.

This study contributes to the academic literature by offering empirical insights into the operational and service-related challenges within the online food delivery supply chain, as viewed by key stakeholders, customers, restaurant partners, and delivery personnel. The thematic categorisation of challenges namely technology, time, service quality, and competition builds upon and extends existing service quality frameworks, particularly in the context of digital, on-demand platforms. Furthermore, the findings underline the importance of coordinated stakeholder interactions and responsive delivery processes, contributing to broader supply chain management theories. By incorporating the perspectives of multiple actors in the supply chain, this study also supports a more integrated view of stakeholder dynamics in digital service ecosystems, thereby enriching theoretical discussions in both service operations and stakeholder theory.

Based on the findings, “Foodie-Fly” should focus on improving the quality of its online food delivery supply chain to better meet the needs of stakeholders and identify improvement opportunities to remain competitive in the market. The challenges of online food delivery services were categorised into four themes through thematic analysis using the NVivo 12 analysis package: technology (related to apps), time, service, and competition. Furthermore, the researcher should investigate negative customer feedback to gain deeper insight into these issues. It is also essential to examine the entire online food delivery process involving consumers, food drivers, and restaurants to enhance the performance of these services.

Consequently, this study emphasises the need to improve the quality of online food delivery services to address challenges effectively. The framework for improvement opportunities developed in this study provides practical implications for overcoming obstacles in online food delivery and enhancing service quality. Additionally, stakeholders in the food delivery industry can benefit from the convenience and efficiency of these services.

To sustain its business and attract new customers, “Foodie-Fly” should continuously enhance the quality of its online food delivery services. This can be achieved by upgrading app features, providing relevant platforms for stakeholders, ensuring easy access to food apps, and incorporating customer service to promptly address stakeholder

concerns. Moreover, “Foodie-Fly” needs to stay informed about its competitors in the market, which will help it understand the evolving needs and preferences of customers, including delivery times, fees, vouchers, and overall service quality.

CONCLUSION

In conclusion, this study provides important insights into the challenges faced by the online food delivery supply chain. Key findings highlight five major themes: technology, time, service quality, competition, and logistics that collectively affect the overall user experience and supply chain efficiency. Among these, delivery timeliness emerged as the most critical concern for both customers and service providers. These findings contribute to a deeper understanding of the online food delivery ecosystem by offering perspectives from multiple stakeholders, including end-users, food delivery riders, and restaurant partners.

The study contributes to the existing literature by integrating operational and experiential insights, reinforcing the importance of last-mile delivery logistics and real-time service responsiveness within the digital food delivery environment. By addressing service quality challenges across the supply chain, the findings align with the study’s goal of improving service delivery and stakeholder satisfaction in Malaysia’s competitive food delivery market. Stakeholders such as platform developers can leverage these insights to optimise app features and supply chain coordination. Delivery riders and restaurant partners can also benefit from clearer expectations and more structured workflows, improving overall service efficiency.

Future research should consider expanding the scope to include a more diverse range of stakeholders, such as casual users, platform developers, food delivery riders, and restaurant partners across different regions and service platforms. Including varied perspectives would allow for richer, more comparative insights into how different online food delivery applications perform and address user needs. Studies could also explore how improvements in service quality such as faster delivery, better app usability, or enhanced customer support might influence consumer behaviour, brand loyalty, and market dynamics. Additionally, investigating the role of sustainability practices within the delivery ecosystem, such as eco-friendly packaging or carbon-efficient logistics, would contribute meaningfully to discussions on responsible digital business models.

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Influence of social media exposure factors on cultural acculturation: Ethnic identity as a mediator

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ABSTRACT

This study delves into the impact of social media platforms on our daily lives, exploring their role in shaping communication behaviours. Conducted among working individuals in Kuala Lumpur, the research specifically investigates the relationship between social media exposure and cultural identity with ethnicity in a moderating role. The widespread adoption of the internet and associated platforms has profoundly affected culture, characterised by shared practices, beliefs, and material possessions passed down through generations. Employing a questionnaire survey, researchers employed quantitative methods. Structural Equation Modelling with Smart PLS was used to test the hypotheses. The study found a significant association between cognitive and social use with cultural acculturation. Moreover, a strong relationship was found between ethnic identity and cultural acculturation. The indirect impact of cognitive and hedonic use was also statistically significant. The relationship between cognitive, hedonic, and cultural acculturation is fully mediated by ethnic identity, with small direct impacts and considerable indirect effects. Social usage, both directly and indirectly, was not statistically significant, suggesting that ethnic identity does not serve as a mediator in the association between social use and cultural acculturation. The insights gained could inform policies and practices aimed at preserving cultural identity and fostering cultural diversity.

Keywords: **Social media exposure, cultural acculturation, ethnic identity, social, cognitive, hedonic use**

INTRODUCTION

Social media has become an integral part of daily life, profoundly influencing global culture in various ways (Abraham et al., 2019). Platforms such as Instagram, Facebook, Twitter, and TikTok have revolutionised global connectivity by transcending historical, social, political, and geographic barriers, establishing themselves as essential components of modern life (Bhanye et al., 2023). Social media facilitates frequent interactions among users, enabling them to post updates, share photos, and create videos (Felix et al., 2017; Shaharuddin, et al., 2022).

Social media extends beyond personal interactions, allowing users to connect across time and space, fostering like-minded communities, and enabling creative participation in public life. Researchers across disciplines continue to explore the causes and effects of platform use, contributing to a deeper understanding of its impacts (Raza et al., 2020).

While earlier cultural theorists viewed group identification as static and evident, contemporary perspectives recognise it as fluid, contextual, and influenced by temporal and spatial shifts. Social media has emerged as a critical element of culture, reshaping how individuals interact and express themselves (Thomas, 2020).

The platforms improve interpersonal relationships by creating spaces for users to share ideas, opinions, and content. The growing use of social media also expands opportunities for analysing cultural identity, enabling researchers to examine data on topics, trends, and influencers (Ahmed & Lugovic, 2019). Over the past decades, social media exposure has significantly influenced cultural identity by fostering social relationships and enabling users to engage with readily accessible online content (Sawyer & Chen, 2012).

BACKGROUND

This study investigates the impact of social media exposure (SME) on the cultural identity of multicultural Malaysians, exploring their interaction and the mediating role of ethnic identity in the relationship between SME and cultural identification. Social media enhances influence, learning, and cultural engagement but can also shape identity and cultural perceptions (Abraham et al., 2019).

Culture is structured through shared similarities among its members, and cultural patterns evolve over time, influencing cross-cultural identity development. SME affects cultural identity by shaping beliefs, attitudes, values, and behaviours (Allen & Busse, 2016). Through acculturation, individuals adopt and practise codes that help them be recognised within cultural groups. Social media accelerates this process by assimilating individuals into diverse cultural identities, overtly and covertly.

Malaysia, as the focus of this research, is home to a rich diversity of ethnicities, religions, and languages. Its population consists of 67.4% Malays and other Bumiputera groups, 24.6% Chinese, and 7.3% Indians (Balakrishnan et al., 2021). Since the internet's introduction in 1995, Malaysians have increasingly relied on it for everyday tasks such as reading the news, paying bills, and maintaining social connections (Wok & Mohamed, 2017).

While social media is influential, sociocultural factors also play a role in identity development (Luqman et al., 2017). Certain online behaviours, such as trolling and image

sharing, contribute to individual and group identity formation (Chae, 2017). Smith et al. (2021) found that social media strengthens cultural identity, community bonds, and family ties, though societal disadvantages like school dropout rates and criminal records also affect one's sense of cultural identity.

In Malaysia's multicultural society, people's behaviours are influenced by various intersecting cultures, including national, religious, ethnic, and institutional or corporate cultures (Balakrishnan et al., 2021; Suharnomo & Syahruramdhan, 2018). Social media serves as a powerful tool for mobilisation and has driven cultural shifts, creating conflicts over definitions of gender roles, sexuality, class, and religion while challenging generational norms (Tang & Chan, 2020).

Although social media is often perceived as a primary driver of cultural identity, other sociocultural and contextual factors also significantly influence identity development. Berry (2005) highlighted the role of sociocultural contexts in psychological well-being during acculturation. Bronfenbrenner's ecological theory (1977, 1979) further emphasises that macro (societal) and micro (family) environments shape identity. This study, therefore, seeks to determine whether SME or environmental factors, such as ethnicity, more strongly influence cultural identity development.

Problem statement

Malaysia stands out in Asia for its high number of Facebook users, with most online users having an active account (Wok & Mohamed, 2017). The widespread use of social media, facilitated by high internet penetration rates, has significantly impacted cultural identity in Malaysia. The ease of access to online communication tools has transformed communication habits, frequencies, and patterns, reshaping societal dynamics (Engelin, 2020).

Malaysia's diverse cultural landscape, characterised by a wide range of lifestyles, beliefs, and values, has made it a unique context for studying the effects of social media exposure (SME) on cultural identity. Social media supports indigenous cultural identity (Lubis et al., 2017), while also redefining cultural norms, rituals, and symbols (Sheldon et al., 2020).

Despite these insights, there remains a dearth of published research on SME and cultural identity in developing countries in Asia, particularly in Malaysia. The nation's multicultural fabric for cultural acculturation is fostered by social media (Tang & Chan, 2020).

SME has led to the emergence of cross-cultural identities, altering how Malaysians perceive and express their individual and collective identities. This transformation is particularly significant as it introduces new rituals, symbols, and social practices while influencing individuals' status and sense of identity. Thus, understanding the interplay of SME with cultural identity is vital to grasp how it shapes the lives of individuals in Malaysia's pluralistic society.

The purpose of this study is to bridge the knowledge gap by investigating the impact of SME on cultural identity in Malaysia. More specifically, this research aims to uncover how social media shapes cross-cultural interactions, influences acculturation processes, and redefines traditional identity frameworks in one of Asia's most diverse countries.

Research questions

1. What is the relationship between the social media exposure factor of social use and cultural acculturation?
2. What is the relationship between the social media exposure factor of cognitive use and cultural acculturation?
3. What is the relationship between the social media exposure factor of hedonic use and cultural acculturation?
4. How does ethnic identity mediate the relationship between social media exposure and cultural acculturation?

Research objectives

The following research objectives were formulated based on the research questions:

1. To examine the relationship between the social media exposure factor of social use and cultural acculturation.
2. To examine the relationship between the social media exposure factor of cognitive use and cultural acculturation.
3. To examine the relationship between the social media exposure factor of hedonic use and cultural acculturation.
4. To identify the mediating role of ethnic identity in the relationship between social media exposure and cultural acculturation.

LITERATURE REVIEW

Social media exposure

This study examines the relationship between social media exposure and cultural acculturation, with a focus on ethnic identity. In cultural communication, new media has gained importance in shaping how individuals connect and express cultural identity (Jiaqi et al., 2023). The research outlines three dimensions of social media exposure—social, hedonic, and cognitive use—based on user needs (Luqman et al., 2017). Prior research shows that these needs significantly influence user behaviour in social media, information systems, and mobile applications (Yin, 2020).

Social use of social media refers to forming new social relationships, seeking people of common interests, and maintaining contact with old friends and acquaintances (Sutcliffe et al., 2023) in a two-way interaction. Netizens believe that social media is more socially engaging as it provides greater control over their interactions and have the potential to connect with people from all over the world (Luqman et al., 2017) because sociability is a context-relevant psychological disposition where an individual's psychological objective in utilising social media is related with the establishment and maintenance of social relationships with others.

Hedonic use of social media refers to raising money (Brandtzaeg & Heim, 2009), passing time (Sagala & Sumiyana, 2020), resting, escaping (Papacharissi & Mendelsohn, 2011), and entertainment (Sagala & Sumiyana, 2020). People feel delighted, happy, and curious during this process. Hedonic social media use fosters social support and relevance (Yingjie, Deng & Pan, 2019). The innately pleasurable aspect of social media encourages

greater engagement and use (Leftheriotis & Giannakos, 2014), demonstrating a strong link between hedonic and social engagements. Users engage in virtual communities through online discussions and word-of-mouth (Lin et al., 2014).

The cognitive use of social media focuses on creating and sharing content as well as accessing content produced by other individuals including sharing opinions, stories, ratings, debates as well as personal photos and videos (Papacharissi & Mendelssohn, 2011). The function of cognitive use allows people to gain and exchange information (Landers & Schimdt, 2016). However, cognitive overload from excessive information may reduce productivity and cause technostress (Bawden & Robinson, 2009; Eppler & Mengis, 2004; Luqman et al., 2017).

Cultural acculturation

Cultural acculturation is a process in which an individual from a culturally or ethnically distinct background adopts values and practices of a culturally dissimilar group while retaining their own culture (Foroudi et al., 2020). Acculturation is multidimensional, involving adjustments and changes in language, socioeconomic factors, and cultural values (Lopez-Class, Castro, & Ramirez, 2011). It is a two-way process where individuals from both minority and majority cultures influence each other (Cole, 2019; van der Zee & van Oudenhoven, 2022).

Acculturation occurs at both individual and group levels, influencing elements like art, fashion, and language to support adaptation (Cole, 2019). Individually, it helps reduce social friction and aids adjustment during extended cultural exposure (Cole, 2019). In multicultural societies like Malaysia, acculturation is shaped by colonisation, globalisation, political shifts, and technological advances. It reflects a balance between embracing new cultural traits and preserving traditional values and beliefs (Berry, 2017).

Ethnic identity

Ethnic minorities are often perceived solely as newcomers undergoing integration into society, which is a limited perspective that overlooks the complexities of their identities and experiences. Second- and third-generation individuals, for instance, are not newcomers but remain subject to these oversimplified frameworks. Consequently, the notion of integration is insufficient to fully capture the articulation and experiences of ethnic minority individuals (Slootman, 2018).

Ethnic identity research spans multiple disciplines, with sociologists focusing on acculturation at the group level and psychologists examining processes at the individual level (Slootman, 2018). The concept of “ethnic options” explores ethnic identification beyond cultural orientation or social cohesion, emphasising the interaction between individuals and external structures rather than solely focusing on ethnic groups (Shootman, 2018).

In Malaysia, a commonly recognised categorical scheme distinguishes between Malays, Chinese, and Indians, though these broad categories mask significant heterogeneity within each group. While studies have explored the distinctions within these categories, they also consider factors such as country of origin, nativity, and generational status. These ethnic classifications are socially constructed and continue to evolve over time (Jensen & Söderberg, 2021).

Social media exposure, ethnic identity and acculturation

Social media has become a core component of modern social life, influencing identity construction through social interactions (Marwick & Boyd, 2014). Identity construction is an inherently social process, shaped by psychological understandings of interactions with others (Bell, 2019). While the internet has facilitated cultural globalisation and redefined cultural identity, it has also raised concerns about its potentially damaging effects on identity and culture (Cvetkovich, 2018).

In multicultural environments, individuals creatively adopt and adapt cultural dispositions, leveraging social media to present themselves across diverse groups (Kim, 2017). Social media-driven interactions play a significant role in shaping identity, but they can also lack reciprocal dynamics between online self-presentation and offline realities (Dey et al., 2017). Furthermore, the improper use of social media can threaten identity stability and cultural harmony within families (Ismail et al., 2023; Wok et al., 2016).

Malaysia's diverse population comprising Bumiputera (59.3%), non-Malay Bumiputera (8.8%), Chinese (24.9%), and Indians (7.0%) reflects a rich variety of lifestyles, traditions, and cultural practices that persist despite modernisation and globalisation (Balakrishnan et al., 2021; Balakrishnan et al., 2024). This diversity, historically influenced by Malaysia's pre-colonial maritime trading system has been shaped by layers of Hindu, Islamic, and animistic traditions, resulting in a syncretic and evolving cultural identity. This diversity has been influenced by Malaysia's pre-colonial maritime trading system, which connects it to other parts of Asia (Balakrishnan et al., 2020).

Social media reshapes communication and infotainment, influencing cultural identity in Malaysia. It has transitioned individuals from passive, appointment-based media consumption to engagement-based interactions, altering how media affects identity and acculturation (Jin et al., 2019; Luqman et al., 2017). Social media platforms, such as YouTube, Facebook, Instagram, and TikTok, enable user-generated content, cross-platform cooperation, and widespread information sharing, making them central to daily life (Balakrishnan et al., 2021; Kent & Li, 2020). Online platforms mediate social identity and cultural perceptions, altering communication patterns (Chen & Dermawan, 2020; Dobbins et al., 2021).

The relationship between social media, identity, and acculturation highlights both positive and negative effects. Although social media fosters interpersonal connectivity and cultural exchange, it also transforms social patterns related to ethnicity, nationality, and other aspects of identity, affecting acculturation processes and cultural comprehension (Forbush & Foucault-Welles, 2016; Rhodes & Baron, 2019).

Theoretical framework

The uses and gratification theory, developed in the 1940s, explores why and how people use media, as well as the gratifications they derive from it (Adeagbo, 2022). Unlike theories that emphasise media influence, this theory focuses on user behaviour from the perspective of need satisfaction, providing a foundation for studying user interactions with new media. It has been widely applied to investigate users' needs and their continuance behaviours in various research contexts (Yin, 2020). A key strength of the theory is its ability to uncover motivations behind consuming specific media content, offering valuable insights into the dynamic relationship between media and its users.

The cultural identity theory examines how individuals use communication to construct and negotiate their cultural group identities and relationships in specific contexts. It posits that culture is one of many identities expressed through communication encounters (Noels et al., 2020). Individuals typically navigate three identity dimensions: human, personal, and social identities. Minority groups in majority-based societies face the dilemma of preserving their heritage culture versus adopting the dominant culture (Moftizadeh et al., 2021). Cross-cultural psychology research underscores the pivotal role of culture and intercultural interactions in shaping behaviours, cognitive processes, and emotional experiences, positioning the theory as a subjective or interpretive framework.

This study's conceptual framework is shown in Figure 1.

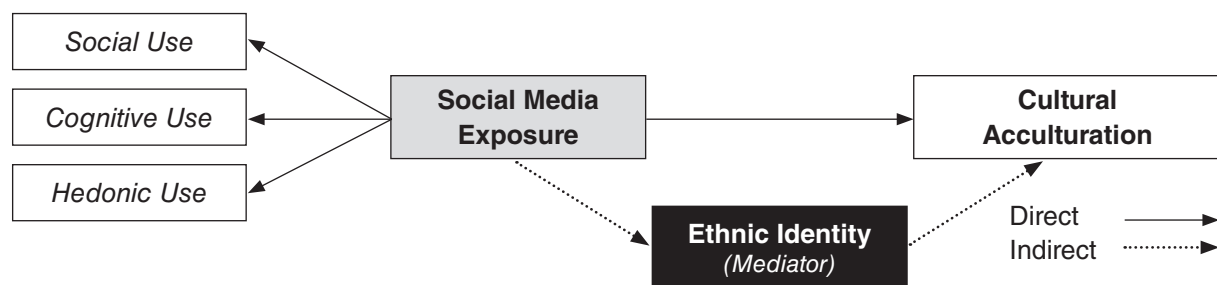


Figure 1. Conceptual framework

Hypotheses construction

This study explores the relationship between social use and the cultural identity theory. Literature suggests that different forms of social use impact individuals in varying ways. Social use has been shown to positively influence cultural acculturation (Zhao et al., 2022). Media serves multiple roles—as entertainment, information, escape, and even a substitute for reality. New identities formed through media can be both compatible and conflicting, with individuals adapting their self-representation across diverse social media contexts (Jin et al., 2019). Therefore, we propose the following hypothesis:

H1: There is a positive and significant relationship between social use and cultural acculturation.

Applying the concept of hedonic use, the independent self-construct the pursuit of happiness, independent subjective well-being is generally characterised by an explicit striving for personal happiness that may involve mastering one's environment and achieving goals (Hayat Bhatti et al, 2020). In other words, with an independent approach to pursuing subjective well-being, the goal is personal happiness, even if this pursuit involves other people (Shin et al, 2020). Based on the arguments above, it is hypothesised that:

H2: There is a positive and significant relationship between hedonic use and cultural acculturation.

The cognitive use of social media involves creating, sharing, and expressing personal traits like expertise, opinions, and interests. Social linkages are driven by shared activities and interests, particularly through content creation and sharing. This interactive

and collaborative environment enhances the likelihood of forming social ties through media exposure (Ross et al., 2019). Identity is understood as a mental framework used to interpret personal information, solve problems, and make decisions (Notley et al., 2023). Therefore, the following hypothesis is proposed:

H3: There is a positive and significant relationship between cognitive use and cultural acculturation.

While there are various reasons for the focus on ethnicity, one of the most prominent is the racial bias between ethnic groups in a country like Malaysia (Aminnuddin, 2020). Even though ethnicity is a social construct instead of a biological one, social media exposure has allowed ethnicity to be largely self-defined and negotiated through social relations. The following hypothesis is proposed based on this argument:

H4: Ethnicity moderates the relationship between social media exposure and cultural identity.

METHODOLOGY

The target respondents for this study were working adults aged 25 to 59 years who actively use social media in their daily lives (Victor et al., 2024). Participants were selected from urban areas of Kuala Lumpur and Selangor, Malaysia, using purposive sampling to ensure that they met the selection criteria based on social media behaviour and engagement. A total of 390 respondents meeting the demographic criteria completed the online survey questionnaire, which was shared through social media platforms. This sampling approach ensured that the participants were relevant to the study's objectives, providing meaningful insights into the relationship between social media exposure and cultural acculturation.

The study used quantitative analysis to collect and interpret numerical data, allowing for pattern identification, prediction, causal testing, and generalisation (Lim et al., 2017). Despite using purposive sampling, the sample reflected the broader population due to Malaysia's high internet penetration, which rose from 62.78% in 2013 to 97.56% in 2023 (Siddharta, 2024). With 26.8 million social media users, which is 78.5% of the population, social media is central to communication and global connectivity in Malaysia. Given that 99.8% of users are aged 18 and above, the study's sample aligns well with the urban, adult demographic of Malaysian social media users.

The survey was conducted entirely online to protect respondent anonymity, minimising social desirability bias and promoting honest responses. The survey takes an average of 10–12 minutes to complete. All questions were marked as “required” in the Google Form to prevent incomplete submissions, enhancing data reliability. Using the Krejcie and Morgan (1970) formula, a minimum of 384 respondents was needed for a population of 1 million. With 390 valid responses from urban working adults using social media, the sample size was met and surpassed the threshold, ensuring sufficient statistical power.

To address common method bias, procedural remedies were implemented, including the use of multiple response formats and reverse-coded items to reduce response pattern

tendencies (Podsakoff et al., 2003). To assess and mitigate multicollinearity, variance inflation factor (VIF) values were calculated. All VIF values were below the acceptable threshold of 5.0 (Hair et al., 2017), indicating no significant multicollinearity issues. These methodological precautions ensured the robustness and validity of the study's findings.

The questionnaire comprised four sections: demographics, social media consumption, ethnic identity, and cultural acculturation. Demographic data covered gender, age, race, education, and employment. Social media consumption was measured using 14 items (Ali-Hassan, Nevo, & Wade, 2015), while ethnic identity and cultural acculturation were assessed using seven- and six-item instrument scales, respectively (Foroudi, Marvin, & Kizgin, 2020). All items used a 7-point scale ranging from 1 ("Strongly Disagree") to 7 ("Strongly Agree"). A pilot test with 42 convenience-sampled respondents confirmed high internal consistency, with all Cronbach's alpha values above 0.7.

To test the study's hypotheses, structural equation modelling (SEM) was employed. The measurement model and confirmatory factor analysis were estimated using the SEM approach, implemented through the SmartPLS 4.0 software.

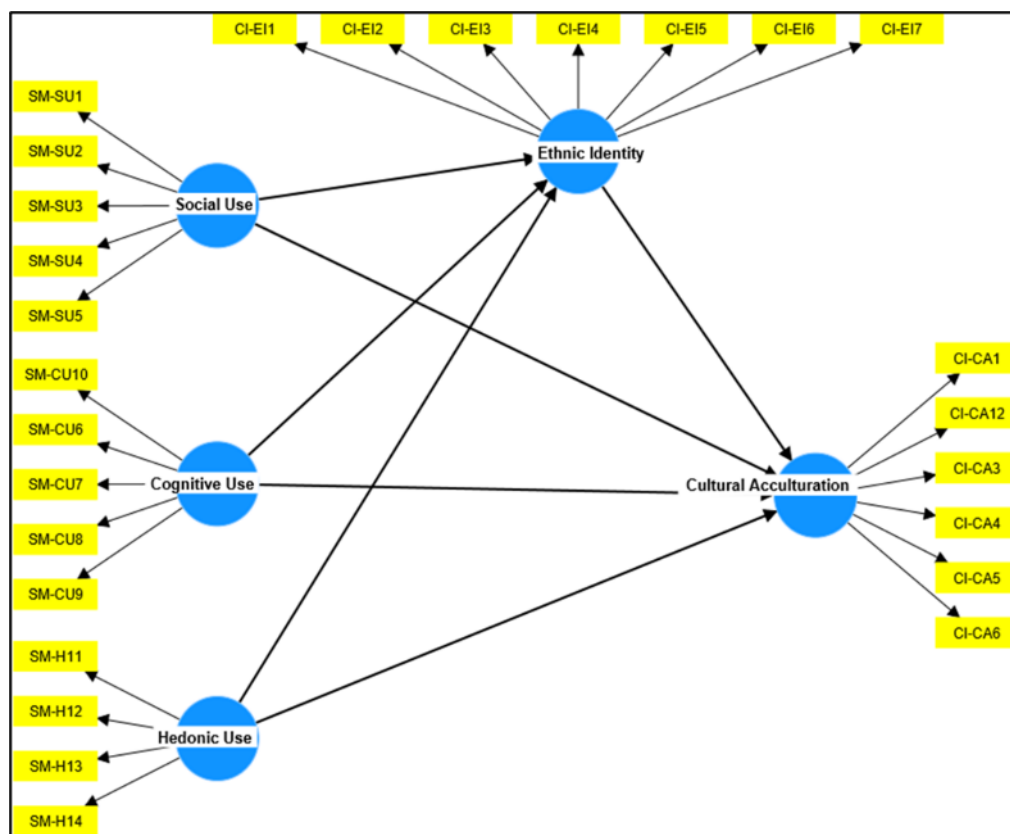


Figure 2. Structural model

RESULTS

Structural Equation Modelling with Smart PLS was used to test the hypotheses developed. The measurement model was assessed for convergent validity and discriminant validity. The structural model developed was evaluated to significant predictors and the mediation effect.

Measurement model

Factor loadings, composite reliability (CR) and average variance extracted (AVE), were used to test the measurement model's convergent validity. The findings are summarised in Table 1.

Table 1. Measurement model

Factors	Items	Loadings	CR	AVE
Social Use	SM-SU1	0.852	0.946	0.77
	SM-SU2	0.825		
	SM-SU3	0.928		
	SM-SU4	0.906		
	SM-SU5	0.898		
Cognitive Use	SM-CU6	0.895	0.94	0.759
	SM-CU7	0.845		
	SM-CU8	0.893		
	SM-CU9	0.893		
	SM-CU10	0.830		
Hedonic Use	SM-HU11	0.900	0.932	0.774
	SM-HU12	0.890		
	SM-HU13	0.883		
	SM-HU14	0.847		
Ethnic Identity	CI-E1	0.775	0.945	0.711
	CI-E2	0.803		
	CI-E3	0.866		
	CI-E4	0.864		
	CI-E5	0.863		
	CI-E6	0.849		
	CI-E7	0.879		
Cultural Acculturation	CA1	.826	0.936	0.709
	CA2	0.866		
	CA3	0.893		
	CA4	0.866		
	CA5	0.747		
	CA6	0.848		

The factor loadings of all the items were greater than 0.7 which satisfies the minimum requirements. The AVE obtained was in the range of 0.709 to 0.779, which is more than the threshold value of 0.5, and the CR values were within the range of 0.932 to 0.946, meeting the minimum requirement of 0.8. As a result, the convergent validity is satisfactory (Hair et al., 2017). Hence, convergent validity at the item levels is supported (Chin, 1998).

Fornell-Larcker's (1981) criterion and Heterotrait-monotrait (HTMT) (Henseler et al., 2015) were used to assess discriminant validity. The results (Table 2) show that all the variances extracted by the diagonal values are more than the correlation coefficients between the off-diagonal values, indicating adequate discriminant validity. Furthermore, the results shown in Table 3 are less than 0.9 which fulfils the criterion of HTMT0.9 (Gold et al., 2001) and confirms that the factors are distinct.

Table 2. Discriminant validity using Fornell-Lacker criterion

	Cognitive Use	Cultural Acculturation	Ethnic Identity	Hedonic Use	Social Use
Cognitive Use	0.871				
Cultural Acculturation	0.267	0.842			
Ethnic Identity	0.361	0.793	0.843		
Hedonic Use	0.402	0.171	0.269	0.880	
Social Use	0.480	0.124	0.123	0.195	0.883

Table 3. Discriminant validity using HTMT criterion

	Cognitive Use	Cultural Acculturation	Ethnic Identity	Hedonic Use
Cognitive Use				
Cultural Acculturation	0.287			
Ethnic Identity	0.389	0.855		
Hedonic Use	0.443	0.185	0.292	
Social Use	0.518	0.131	0.122	0.214

Structural model

The structural model was developed using Smart PLS as shown in Figure 1. The bootstrapping procedure with a resample of 5,000, as suggested by Hair et al. (2017), was used to test the hypotheses.

Table 4. Hypothesis testing—direct effect

Relationship	Beta	t-value	p-value	Decision	R ²	Q ²	f ²	VIF
Cognitive Use → Cultural Acculturation	0.032	0.710	0.000	Supported			0.023	1.622
Hedonic Use → Cultural Acculturation	0.044	1.075	0.283	Not supported	0.633	0.06	0.004	1.219
Social Use → Cultural Acculturation	0.048	1.285	0.019	Not supported			0.025	1.305
Cognitive Use → Ethnic Identity	0.334	6.064	0.000	Supported			0.081	1.491
Hedonic Use → Ethnic Identity	0.148	2.964	0.003	Supported	0.152	0.136	0.022	1.193
Social Use → Ethnic Identity	-0.066	1.613	0.107	Not supported			0.004	1.299
Ethnic Identity → Cultural Acculturation	0.811	24.089	0.000	Supported	0.633	0.06	1.519	1.18

The direct effects in Table 4 show that Cognitive Use and Social Use have significant relationships with Cultural Acculturation, with a p-value below 0.05 and effect size exceeding 0.020. However, Hedonic Use does not significantly relate to Cultural Acculturation, as its p-value is above 0.05 and effect size is below 0.02. Ethnic Identity is

significantly related to Cultural Acculturation, with a p-value below 0.05 and an f^2 value of 1.519.

An R-squared value of 0.152 indicates that 15.2% of the variation in Ethnic Identity is explained by variations in Cognitive Use, Hedonic Use, and Social Use. Cognitive Use and Hedonic Use significantly relate to Ethnic Identity, as their p-values are below 0.05 and effect sizes exceed 0.02. Social Use, however, is not significantly related to Ethnic Identity.

The cross-validated redundancy Q^2 value assesses the predictive relevance of the model. The blindfolding procedure yielded Q^2 values of 0.06 and 0.136, both greater than 0, confirming the model's predictive relevance (Hair et al., 2017).

Table 5. Hypothesis testing—indirect effect

Relationship	Beta	t-value	p-value	Decision
Hedonic Use → Ethnic Identity → Cultural Acculturation	0.120	2.912	0.004	Supported
Social Use → Ethnic Identity → Cultural Acculturation	-0.054	1.612	0.107	Not supported
Cognitive Use → Ethnic Identity → Cultural Acculturation	0.270	5.765	0.000	Supported

The results of the indirect effects are presented in Table 5. The results reveal that the indirect effect of Cognitive Use and Hedonic Use are significant while Social Use is insignificant. Since the direct effects of Cognitive Use and Hedonic use are insignificant and indirect effects of Cognitive Use and Hedonic Use are significant, it can be concluded the Ethnic Identity completely mediates the relationship between Cognitive Use, Hedonic Use and Cultural Acculturation. Furthermore, since both the direct and indirect effects of Social Use are insignificant, it can be concluded that Ethnic Identity does not mediate the relationship between Social Use and Cultural Acculturation.

DISCUSSION

This study's findings provide insights into the complex correlation between exposure to social media, ethnic identity, and cultural acculturation among employed individuals in Kuala Lumpur, Malaysia. The analysis of direct effects indicates considerable correlations between the cognitive use and social use of social media platforms, as well as cultural acculturation. These findings are consistent with prior research that highlights the impact of social media use on cultural identification (Singh, 2020). The study reveals that cognitive use, which refers to activities such as creating and sharing content, and social use, used to interact and maintain relationships, have a major influence on cultural acculturation. Nevertheless, how one makes use of social media for hedonic purposes, such as leisure and pleasure, did not demonstrate a significant correlation with cultural acculturation. This implies that one's ethnic identity impact their use of social media and, consequently, their ability to deal with shifts in cultural identity in a multi-ethnic country like Malaysia. Our understanding of how ethnicity influences cultural identification processes in relation to social media exposure is enhanced by these findings (Luqman et al., 2017; Yin, 2020).

The results reveal a significant correlation between ethnic identity and cultural acculturation, affirming prior studies on ethnicity's role in shaping cultural identity (Ward & Szabó, 2023). Ethnic identification mediates the relationship between cognitive and hedonic social media use and cultural acculturation, demonstrating its influence on social media usage and cultural adaptation in Malaysia's multicultural context. The indirect effects analysis shows ethnic identification as a full mediator between cognitive, hedonic usage, and cultural acculturation, emphasising its importance in understanding social media's impact on cultural identity. However, the indirect effects of social media on cultural acculturation are insignificant, suggesting a limited role for ethnic identification in this relationship and highlighting the need for further research.

The analysis of indirect effects shows that ethnic identification fully mediates the relationship between cognitive and hedonic social media use and cultural acculturation. Thus, recognising ethnic identity is essential in understanding how social media use influences cultural identity. However, the indirect effects of social media use on cultural acculturation were found to be insignificant, suggesting a limited role of ethnic identification in this relationship and emphasising the need for further research.

This research contributes to literature by empirically exploring the relationship between social media exposure, ethnic identification, and cultural acculturation in Malaysia's ethnically diverse context. It examines the impact of social media on cultural identity among working adults in Kuala Lumpur, offering insights into preserving cultural heritage and fostering diversity amid technological and global shifts. However, the study's focus on a specific demographic and location may limit its broader applicability. Future research should investigate these relationships across wider populations and varied settings to enhance the understanding of social media's role in shaping cultural identity.

CONCLUSION

In conclusion, the results of this study offer insights into the multifaceted relationship between ethnic identification, cultural acculturation, and social media use among employed Malaysians in Kuala Lumpur. The results indicate that hedonic use of social media platforms does not show significant correlation with cultural acculturation, but cognitive and social use do. It is important to include individuals' ethnic identity when trying to understand how social media affects cultural identity processes. Ethnic identity was additionally found to mediate the relationship between cognitive use, hedonic use, and cultural acculturation.

This study has important theoretical implications, especially for the cultural identity theory as well as the uses and gratifications theory. This study extends previous research on the impact of media by adding to the understanding of why people use social media by applying the uses and gratification theory. We learn more about people's motivations and behaviours when we apply this theoretical framework to the study of user behaviour and needs within the framework of new media platforms, such as social media.

In addition, the cultural identity theory offers a perspective to analyse how people navigate and build their cultural identities when exposed to social media. This study contributes to our understanding of cultural identification processes, especially in heterogeneous cultures like Malaysia, by examining the ways in which ethnic identity and social media use interact with one another. Promoting cultural diversity as well as

preserving traditions and cultures require an understanding of how individuals navigate cultural identity dynamics in the digital era.

Both individuals and workplaces can benefit from applying the study's practical conclusions. To better promote cultural diversity and inclusion in the workplace, organisations would do well to study how social media exposure affects cultural identity. An inclusive workplace can be created when companies use social media to help employees communicate and work together across cultural boundaries. People can also get insights into how their social media use affects their cultural identity, which can help them make better choices regarding their online personas and relationships.

It should be noted, nevertheless, that this study does have certain limitations. The results may not be applicable to a broader population because they were based on a single survey in one place. Additionally, the study employed a cross-sectional research design, which limits the ability to establish causality between social media exposure, ethnic identity, and cultural acculturation. To better understand the intricate interaction among social media use, ethnic identification, and cultural assimilation, future studies could investigate these connections across more diverse population and settings, including rural communities and different ethnic groups.

Furthermore, the long-term impacts of social media usage on cultural identification processes should be better understood by longitudinal investigations which could provide deeper insights into how social media engagement shapes identity over time. Future research could also incorporate qualitative methods to complement quantitative findings, allowing for a more nuanced understanding of personal experiences and social media's role in shaping cultural identity.

Despite these limitations, the study's theoretical and practical contributions enhance our understanding of how social media affects cultural identity dynamics. By exploring social media's influence on ethnic identity and acculturation, this study provides valuable insights for policymakers, educators, and organisations seeking to foster cultural inclusivity in an increasingly digitalised world.

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The relationship between leadership styles, communication styles and employee work performance in a biogas company: Agile work environment as a mediating factor

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ABSTRACT

The success of any company depends significantly on its employees' ability to deliver consistent, high-level work performance. This, in turn, is influenced by a positive and supportive working environment. The biogas industry, experiencing growing demand, faces several opportunities for expansion. However, the successful execution of these opportunities has been hindered by inadequate employee performance. This study aims to investigate the relationship between leadership styles, communication styles, and employee work performance in the biogas industry, with a focus on the agile work environment as a mediating factor. Using a self-administered questionnaire and random sampling technique, data were collected from 344 respondents. The analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software, and Hayes Process Model was utilised to explore the mediating role of the agile work environment. The results reveal that effective leadership, supportive guidance, and clear communication are critical drivers of improved employee performance. Additionally, the findings highlight that leadership and communication styles significantly influence work outcomes, with the agile work environment playing a key mediating role. This emphasises how agility enhances employees' responsiveness, adaptability, and overall efficiency.

Keywords: *Communication styles, leadership styles, employee work performance, agile work environment, organisational culture*

INTRODUCTION

Malaysia's biogas industry is expanding, particularly through the use of palm oil mill effluent (POME) and organic waste to generate renewable energy. Notable initiatives include the Lepar Hilir Biogas Power Plant and projects by the Malaysian Palm Oil Board (MPOB), FELDA, and Offshore Engineering. As a cornerstone of sustainable energy, biogas contributes to climate change mitigation and transforms low-cost feedstocks into sustainable chemicals (Kabeyi & Olanrewaju, 2022; Winqvist et al., 2019). However, the industry's growth depends on technological innovation and a skilled, adaptable workforce.

Central to this is effective communication, which aligns goals, reduces errors, and builds trust (Hee et al., 2019; Saputra, 2021). Miscommunication, by contrast, leads to mistrust and inefficiency (Kalogiannidis, 2020). Additionally, leaders who communicate expectations clearly foster accountability and confidence (Musheke & Phiri, 2021).

Leadership also drives motivation and teamwork. Effective leaders enhance self-confidence and support employees in navigating complex tasks (Karimi et al., 2023). Adaptive leadership styles that address diverse needs further sustain engagement and loyalty (Paais & Pattiruhu, 2020). Complementing this is an agile work environment, which boosts creativity and satisfaction through flexibility and collaboration (Cappelli & Tavis, 2018).

Success in the biogas sector lies in the synergy between technology and human capital. Organisations that promote communication, leadership, and agility will build resilient teams and drive sustainable growth (Nguyen, 2023; Peeters et al., 2022).

PROBLEM STATEMENT

Work performance is essential to organisational success, reflecting employees' ability to meet tasks and contribute to goals. However, issues like inefficiency, burnout, and low motivation remain common (Gaba, 2025; Kuswati, 2020). Leadership and communication styles play a crucial role in shaping job satisfaction, motivation, and productivity (Eliyana et al., 2019). Effective leadership marked by empowerment and structured incentives boosts job commitment and performance (Ngwa et al., 2019; Yukl & Gardner, 2020), while adaptable leadership encourages innovation and growth in flexible settings.

Communication styles are equally vital. Supportive, transparent communication fosters trust, engagement, and collaboration, enhancing efficiency and organisational loyalty (Jang et al., 2021). Leaders who promote open dialogue create more positive, productive workplaces (Cooks-Campbell, 2022).

Yet, gaps remain in understanding how leadership and communication interact in agile environments (Brush & Silverthorne, 2022). This study explores their combined influence on employee performance, aiming to improve long-term engagement, well-being, and sustainable performance in today's dynamic workspaces.

LITERATURE REVIEW

Organisational culture theory

The Organisational Culture Theory provides a comprehensive lens for understanding how individuals collaborate, communicate, and function within a workplace environment

(He, 2025). It encompasses the shared values, beliefs, and norms that shape employee behaviours and attitudes (Dewar, 2025). Schein's (1985) multi-layered model comprising artifacts, espoused values, and basic underlying assumptions explains how culture operates at both visible and unconscious levels to influence employee performance. At its core, culture shapes how individuals perceive their roles and responsibilities, affecting motivation and work outcomes.

Research indicates that organisational culture acts as a mediating force between leadership practices and employee performance. Denison et al. (2006) found that leadership's impact is amplified when leaders actively shape a positive and consistent culture. Leaders influence change not only through policies but by embodying the values and assumptions they promote (Bagga et al., 2023).

A strong, positive culture boosts motivation, productivity, and job satisfaction (Praveena & Fonceca, 2023). It encourages cohesive behaviour and commitment to organisational goals. Therefore, cultivating an effective culture is not just an human resource initiative, it is a strategic imperative. Leaders who understand and manage organisational culture effectively are better positioned to drive employee performance and ensure long-term success (Denison et al., 2006; He, 2023; Dewar, 2025).

Leadership styles

Leadership has evolved significantly, moving beyond traditional hierarchical models toward more empowering and participatory approaches (Carvajal et al., 2023). Contemporary leadership is now viewed as an interactive process shaped by leaders, followers, and the organisational environment. Modern styles such as transformational and democratic leadership emphasise motivation, innovation, and employee satisfaction, making them better suited to today's dynamic workplaces (Prayogi & Lesmana, 2021).

Transactional leadership, rooted in structured goals and contingent rewards, is effective in stable environments where clear roles and outcomes are necessary (Cherry, 2025; Makinde, 2023). However, its reliance on corrective actions and limited innovation makes it less effective in promoting adaptability and long-term growth (Harris & Cha, 2022).

Transformational leadership, in contrast, inspires followers to exceed expectations by fostering trust, creativity, and shared purpose. It has been shown to enhance engagement and performance, particularly in Malaysia (Voordt & Jensen, 2023). Still, ethical concerns arise when charisma leads to manipulation or dependency (Ndege, 2014). Autocratic leadership centralises authority, enabling fast decisions but often leading to dissatisfaction, low morale, and resistance to change due to lack of empowerment (Oh et al., 2023; Rizvi, 2023). While useful in crises, it undermines innovation in the long term.

Democratic leadership promotes collaboration and inclusion, resulting in higher job satisfaction and creativity, however, its slower decision-making can reduce agility in fast-paced environments (Raghvendra & Vijayendra, 2024). Overall, no single style is universally ideal. Effective leadership depends on aligning style with context, organisational needs, and employee dynamics to foster sustainable performance and innovation.

Communication styles

Communication is a fundamental pillar of organisational success, directly impacting performance, growth, and employee productivity (Kalogiannidis, 2020). Effective

communication fosters motivation, skill development, and innovation, yet diverse communication styles present challenges in achieving universal effectiveness (De Santis, 2023; Dhillon & Kaur, 2021). Adaptive communication strategies are essential, as no single approach suits all situations (Kreitler, 2021). Passive communication is characterised by the reluctance to express needs or opinions, leading to self-neglect, reduced participation, and hindered team dynamics (Askew, 2023; Turk, 2023). It contributes to miscommunication, weak collaboration, and lower trust (Wilmot & Hocker, 2013), especially when displayed by leaders (Sharma, 2023).

Aggressive communication, defined by dominance and intimidation, damages interpersonal trust and team morale. It often fosters fear-based environments, stifling creativity and increasing stress and absenteeism (Maryani & Gazali, 2024; Shaharuddin et al., 2022; Syed et al., 2021; Talia et al., 2021). Passive-aggressive communication involves indirect negativity, such as sarcasm or procrastination, which undermines cooperation and weakens morale (Guy-Evans, 2023). This style often stems from unresolved conflict or fear, disrupting trust and clarity (Legood et al., 2021; Segreto, 2023).

Assertive communication, the most effective style, balances confidence with respect for others. It enhances trust, collaboration, and problem-solving, while promoting healthy workplace relationships and psychological safety (Jenkins, 2022; Moss et al., 2021). Although widely endorsed, assertiveness must be contextually applied, considering cultural norms and emotional intelligence. The ability to adapt communication styles is crucial for building resilient, productive organisations (Bel et al., 2018; Gupta, 2022).

Employees work performance

Work performance is a critical driver of organisational success, closely tied to employee motivation, commitment, and engagement. In project-based environments, low motivation can disrupt workflow and productivity; yet many organisations still overlook the importance of involving employees in decision-making processes (Bevan, 2012; Kuswati, 2020; Rehman et al., 2020). High-performing employees consistently exceed expectations, demonstrating adaptability and dedication that enhance customer satisfaction and create competitive advantage (Fuentes et al., 2020; Suknunan et al., 2022).

Performance is often evaluated by quantity, quality, efficiency, and policy compliance (Tuan et al., 2021), with those possessing specialised skills delivering higher quality outcomes (Kalogiannidis, 2020). The relationship between managers and employees also plays a significant role. Supportive leadership fosters a positive work climate that boosts morale and performance (Jena, 2021). Furthermore, alignment with organisational values enhances employee resilience and engagement (Ausat et al., 2022; Suharto et al., 2019). Ultimately, cultivating a workplace that values autonomy, communication, and growth opportunities translates employee potential into sustained performance and long-term organisational success (Ramaswamy et al., 2023; Saadeh & Suifan, 2020).

Agile work environment

Agile work environments prioritise responsiveness, collaboration, and value creation, making them ideal for industries facing rapid change (Brush & Silverthorne, 2022). Central to agile success is learning agility, the capacity to absorb and apply knowledge effectively in decision-making (De Meuse et al., 2010). Agile practices shift focus from rigid metrics like attendance to adaptability, continuous improvement, and outcomes (Fishleigh, 2017).

More than a set of tools, agility is a mindset that enables organisations to respond swiftly and effectively to change (Cinnioğlu, 2020). Leadership that fosters trust, consensus, and transparent communication enhances this adaptability (Lindskog & Netz, 2021).

In sectors such as biogas, agility supports innovation and sustainability amid regulatory and operational challenges (Johansson & Heide, 2008). Agile methods also reduce costs and improve well-being through flexible work models (Peeters et al., 2022). In engineering settings, iterative planning and cross-functional collaboration accelerate progress and precision (Gabriel et al., 2021). Ultimately, agility promotes resilience, helping organisations sustain performance and growth in uncertain environments (Crnogaj et al., 2022; Waseel et al., 2024).

Relationship between communication styles and agile work environment

Agile methodologies have emerged as a cornerstone in modern work environments, focusing on responsiveness, collaboration, and value creation in dynamic settings (Brush & Silverthorne, 2022; Gabriel et al., 2021). A crucial factor in their success is communication, which can either facilitate or hinder the interactions necessary within agile teams (Ibekwe, 2023). Research highlights that transparent and adaptable communication is vital for effective collaboration and coordination in such teams (Dühring & Zerfass, 2021). Beyond frequency, the quality and flexibility of communication is key to addressing challenges in real-time. Communication styles play a significant role in conflict resolution, with cooperative approaches enhancing team cohesion and performance (Lindsjörn et al., 2016). Thus, for agile transformations to succeed, communication strategies must foster transparency, continuous feedback, and adaptability, creating a culture of learning and improvement (Naslund & Kale, 2020). These strategies are integral to maintaining agility and driving organisational success. Based on these insights, we propose the hypothesis:

H1: Communication styles have a significant relationship with an agile work environment.

Relationship between leadership styles and agile work environment

Agile work environments, marked by adaptability and process flexibility, are essential in today's fast-changing business landscape (Attar & Abdul-Kareem, 2020). Leadership styles significantly influence the success of these environments, shaping innovation, collaboration, and outcomes (Siregar et al., 2023). Transformational leadership is especially effective, inspiring commitment to agile practices and fostering innovation through team cohesion and personal growth (Mani & Mishra, 2020). Similarly, democratic leadership promotes shared decision-making and autonomy, enhancing responsiveness and team collaboration (Üstgörül & Akkaya, 2020). In contrast, autocratic leadership, with its top-down control, hinders agility by limiting creativity and adaptability. These findings emphasise the importance of leadership styles that align with agile principles to optimise team performance. Despite these insights, further research is needed to explore the mediating role of agile environments. Thus, we propose the following hypothesis:

H2 :Leadership styles have a significant relationship with an agile work environment.

Relationship between agile work environment and employee work performance

The relationship between employee performance and organisational agility has gained increasing attention, especially in industries like biogas, where research remains scarce. Existing literature highlights the influence of workplace environments on employee performance across various organisational levels (Zhenjing et al., 2022). However, its impact on biogas industry employees specifically remains underexplored. Agile methodologies, which emphasise self-managing teams, collaboration, autonomy, and adaptability, contribute significantly to improved performance outcomes (Beck et al., 2001; Grass et al., 2020). These methodologies align tasks with client needs, leading to higher-quality results and positive employee attitudes. Moreover, positive work environments are shown to enhance productivity, with employees exhibiting higher performance due to increased motivation and commitment (Wang et al., 2022; Zhenjing et al., 2022). Agile work environments amplify this effect by providing conditions that foster project success (Serrador & Pinto, 2015). Based on these insights, we propose the hypothesis:

H3: Agile work environment has a significant relationship with employee work performance.

Relationship between communication styles and employee work performance

The impact of communication styles on employee work performance is pivotal for organisational success, yet it remains underexamined in industries like biogas (Diamantidis & Chatzoglou, 2018). Effective communication enhances performance by shaping how employees interact, which directly influences productivity (Iyer, 2023). Research highlights that open, respectful communication fosters collaboration, innovation, and smoother workflows, empowering employees to share ideas (Johnson & Brown, 2019). Conversely, negative communication, such as rudeness or disrespect, can severely hinder performance, causing discomfort and impeding teamwork (Lee et al., 2020). Therefore, organisations must cultivate a culture of inclusive, transparent communication to optimise employee performance. Poor communication practices, on the other hand, can undermine collaboration and overall success (Solitto & Cramer, 2016). Based on these insights, the hypothesis is proposed as below:

H4: Communication styles have a significant impact on employee work performance.

The relationship between leadership styles and employee work performance

Effective leadership is crucial in driving organisational success and directly influencing employee performance (Baig et al., 2019; Weston-Smyth, 2024). Leadership behaviours, including how leaders engage, motivate, and support their teams, significantly impact morale, productivity, and output (Weston-Smyth, 2024). Extensive research has shown that leadership styles, particularly transformational leadership, positively affect employee performance by fostering innovation, providing support, and creating an empowering environment (Wen et al., 2019). Transformational leaders inspire and motivate their

teams through vision and individualised attention, leading to greater job satisfaction and performance (Cherry, 2024). Conversely, autocratic or laissez-faire leadership styles are associated with lower employee satisfaction and higher turnover rates (Sanam, 2023). Additionally, the Situational Leadership Theory asserts that leaders who adapt their style to employee needs can enhance performance (Cherry, 2024). These findings underscore the significant impact of leadership styles on employee work performance, which led to the hypothesis:

H5: Leadership styles have a significant relationship with employee work performance.

Mediating effect of agile work environment in between communication styles, and employee work performance

Communication styles are crucial in agile work environments, significantly impacting employee performance and team effectiveness. Once considered a basic skill, communication now drives organisational adaptability and success (Kalogiannidis, 2020). Agile teams must balance rapid communication with the risk of misunderstandings or overload (Yermolaieva, 2020), making effective communication essential for cohesion and productivity. Adapting to diverse communication preferences enhances collaboration and problem-solving. Dühring and Zerfass (2021) noted that strong communication supports innovation through faster decision-making and adaptability. Moreover, employees with high organisational commitment are more engaged and capable of managing tasks effectively, leading to better outcomes (Park et al., 2022; Suharto et al., 2019). Despite these findings, few studies have examined how agile work environments mediate these dynamics. Therefore, the following hypothesis is proposed:

H6: Agile work environment has a mediating effect between communication styles and employee work performance.

Mediating effect of agile work environment in between leadership styles, and employee work performance

The workplace environment significantly influences employee performance, particularly in agile settings that demand flexibility and responsiveness (Kazancoglu et al., 2022). Leadership styles are central to this, with adaptive approaches like servant leadership enhancing autonomy, morale, and empowerment (Fischer & Charef, 2022). In agile environments, leaders act as facilitators, building trust and accountability while empowering teams. Inclusive leadership strengthens collaboration, transparency, and resilience, enabling effective management of complex, fast-paced tasks (Joseph, 2024). Leaders who promote open communication and creativity foster continuous improvement and high performance (Supriyanto et al., 2023). These approaches also boost motivation and job satisfaction, driving sustainable organisational success. However, limited research has explored the agile work environment as a mediating factor. Therefore, this study proposes the following hypothesis:

H7 :Agile work environment have a mediating effect in between leadership styles and employee work performance.

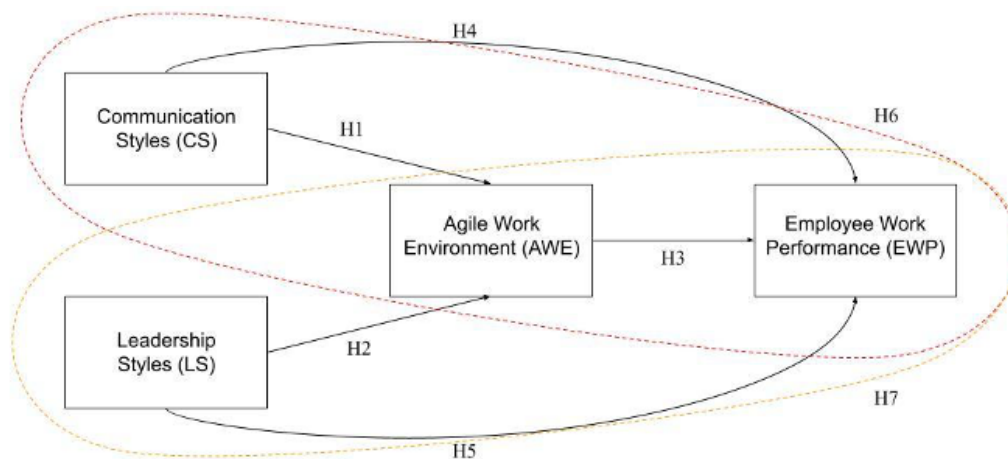


Figure 1. Conceptual framework

METHODOLOGY

This study employed a quantitative research design with data analysed via SPSS. A structured questionnaire with Likert-scale items, adapted from various scholars, was emailed in English to 344 randomly selected respondents from a company and its affiliates (total workforce ~550). The sample size follows recommendations by Krejcie and Morgan (1970) as well as Cohen and Krejcie (1975).

Table 1. Adapted questionnaire items

Variables	Items	Sources
Communication Styles	CS1, CS3, CS6	Raslie (2021)
	CS2, CS4, CS5	Bocar, A. C. (2017)
	CS7, CS8	Travers, W. G. (2024)
Leadership Styles	LS1, LS3, LS4, LS5, LS6, LS7, LS8	Northouse, P. G. (2020)
	LS2	Ismail et al. (2010)
Employee Work Performance	EWP1, EWP2, EWP3, EWP4, EWP5	Liu et al. (2020)
Agile Work Environment	AWE1, AWE2, AWE3	Crnogaj et al. (2022)
	AWE4, AWE5	Saeed et al. (2024)

This study employed Pearson's correlation to examine the strength and direction of relationships between communication styles, leadership styles, employee work performance, and the mediating role of the agile work environment. To assess mediation effects, the PROCESS macro by Hayes (2013) was used, allowing accurate estimation of direct and indirect effects with confidence intervals. Reliability and validity tests were conducted during both pilot and actual phases. Cronbach's alpha values ranged from 0.573 to 0.816, indicating acceptable reliability; lower values were retained to preserve construct validity (Chan et al., 2020).

The Kaiser-Meyer-Olkin (KMO) values ranged from 0.608 to 0.815, confirming sampling adequacy and construct validity. Normality tests based on skewness and kurtosis showed that all variables were approximately normally distributed, with slight left skewness suggesting a tendency toward higher ratings. Employee work performance

(EWP) and agile work environment (AWE) had moderate skewness, but their kurtosis values indicated acceptable variability without extreme outliers. Overall, the analysis supports the robustness and appropriateness of the measurement and analytical tools used.

Table 2. Skewness and kurtosis for all variables

Variables	Mean	Skewness		Kurtosis	
	Statistics	Statistics	Std. Error	Statistics	Std. Error
CS	32.4383	-0.558	0.135	-0.598	0.270
LS	32.8858	-0.606	0.135	-0.575	0.270
EWP	20.0556	-1.088	0.135	-0.847	0.270
AWE	20.2500	-1.010	0.135	-0.836	0.270

FINDINGS AND DISCUSSION

Descriptive analysis of respondents

The respondents in this study consisted of 344 individuals, comprising 59% male (203) and 41% female (141). Age distribution revealed that 49.1% were between 21 and 30 years, 32.3% were between 31 and 40 years, 12.8% were between 41 and 50 years, and 5.8% were above 50 years. Regarding job positions, 41.9% were non-executive staff, 25.3% were executives, 17.7% were managers, and 6.7% held general manager roles. This diverse sample provides a broad perspective on the relationship between leadership, communication styles, and employee work performance across various demographic groups and organisational positions.

Table 3. Descriptive analysis of respondents

Item	Category	Frequency	Percentage (%)
Gender	Male	203	59.0
	Female	141	41.0
Age	21 – 30 years	169	49.1
	31 – 40 years	111	32.3
	41 – 50 years	44	12.8
	Above 50	20	5.8
Job Position	Non-Executive	144	41.9
	Executive	87	25.3
	Manager	61	17.7
	General Manager	23	6.7

Relationship between communication styles and agile working environment

The study found a moderate correlation between communication styles and the agile work environment ($r = 0.328$, $p = 0.001$), suggesting communication plays a supportive but not dominant role. While it enhances coordination and decision-making, agility relies more on adaptability, transparency, and iterative feedback than hierarchical communication. This supports prior research emphasising that successful agile practices require comprehensive

strategies beyond communication alone (Dühring & Zerfass, 2021; Gabriel et al., 2021; Naslund & Kale, 2020).

Relationship between leadership styles and agile working environment

The study revealed a moderate correlation between leadership styles and agile work environments ($r = 0.410$, $p = 0.001$), highlighting leadership's crucial role in supporting agility. Transformational and democratic styles enhance autonomy, creativity, and collaboration, aligning with agile principles (Gutiérrez et al., 2022; Üstgörül & Akkaya, 2020). In contrast, autocratic leadership hinders agility due to its rigidity (Jony et al., 2019). These findings affirm that effective leadership is key to fostering adaptability and engagement in agile work settings.

Relationship between agile working environment and employee work performance

The study found a moderate positive correlation between the agile work environment and employee performance ($r = 0.429$, $p = 0.001$), indicating that agility enhances adaptability, collaboration, and productivity. Supported by Grass et al. (2020) and others, agile practices boost morale, job satisfaction, and goal alignment, fostering continuous improvement and commitment.

Relationship between communication styles and employee work performance

The study revealed a moderate correlation between communication styles and employee performance ($r = 0.299$, $p = 0.001$), suggesting a modest yet significant impact. Effective communication enhances job satisfaction and innovation (Johnson & Brown, 2019), while poor communication hampers morale (Moon & Morais, 2023). However, performance is also influenced by leadership, culture, and job design (Dettling, 2023; Diamantidis & Chatzoglou, 2018).

Relationship between leadership styles and employee work performance

The study found a moderate to strong correlation between leadership styles and employee performance ($r = 0.446$, $p = 0.001$), highlighting leadership's vital role in enhancing productivity and engagement. Transformational leadership fosters motivation, cohesion, and innovation (Baig et al., 2019; Cherry, 2023), while autocratic or laissez-faire styles hinder performance (Sanam, 2023). These results support the Situational Leadership Theory, emphasising adaptive leadership tailored to team needs for optimal outcomes.

Table 4. Pearson correlation analysis for each variable

Hypothesis	Variables	Pearson Correlation (r)	Sig.
H1	CS → AWE	0.328	< 0.001
H2	LS → AWE	0.410	< 0.001
H3	AWE → EWP	0.429	< 0.001
H4	CS → EWP	0.299	< 0.001
H5	LS → EWP	0.446	< 0.001

Mediating effect of agile work environment on communication styles and employee work performance

The study found that the agile work environment significantly mediates the relationship between communication styles and employee performance ($b = 0.1068$). Communication's impact on performance is amplified in agile settings, as confirmed by a bootstrapped confidence interval excluding zero. Agile practices marked by transparency, collaboration, and rapid decision-making enhance communication's effectiveness (Yermolaieva, 2020). These findings underscore how agile environments strengthen communication's role in improving productivity, creativity, and problem-solving (Dühring & Zerfass, 2021; Kalogiannidis, 2020).

Mediating effect of agile work environment on leadership styles and employee work performance

The Hayes Process Macro analysis confirmed that the agile work environment significantly mediates the relationship between leadership styles and employee performance. Hypothesis 7 showed an indirect effect ($b = 0.1068$) and Hypothesis 8 ($b = 0.1027$), with both confidence intervals excluding zero. These findings highlight the agile environment's role in enhancing leadership effectiveness by promoting adaptability, collaboration, and empowerment (Üstgörül & Akkaya, 2020), making it essential for optimising team performance and organisational success.

Table 5. Hayes process macro analysis results

Hypothesis	Variables	Indirect Effects (b)	BootLLCI	BootULCI
H7	CS → AWE → EWP	0.1068	0.1573	0.0630
H8	LS → AWE → EWP	0.1027	0.1559	0.0545

IMPLICATIONS AND CONCLUSION

Research contributions

This study advances the Organisational Culture Theory by showing how leadership and communication styles foster agile, high-performing cultures, especially in innovation-driven sectors like biogas. It identifies the agile work environment as a key mediator linking flexibility, trust, and performance. Practically, it offers strategies for enhancing workplace culture through inclusive leadership, clear communication, and employee autonomy. Methodologically, it contributes robust tools, such as segmented leadership behaviours and a comprehensive Likert scale, to deepen understanding of leadership's impact on organizational outcomes.

Research limitations and recommendations

This study provides valuable insights into agile work environments but has several limitations. Its broad approach may overlook industry-specific nuances, and the exclusion of working culture, peer communication, and technological tools restricts understanding of key agility factors. The use of a cross-sectional, quantitative method limits depth and fails to capture evolving behaviours. Additionally, its focus on the biogas sector reduces generalisability. Future research should adopt mixed-method and longitudinal approaches

with more diverse samples to offer deeper, more applicable insights into agile practices and leadership across different organisational contexts.

Conclusion

This study highlights the critical role of communication and leadership styles in shaping employee performance, with the agile work environment serving as a key mediator. Adaptive leadership and transparent, trust-based communication foster engagement and satisfaction, while agility—marked by flexibility and collaboration—amplifies these effects. Leadership that promotes inclusivity and communication that encourages collaboration create conditions for improved performance. The findings underscore the need for organisations to cultivate an agile culture that supports continuous improvement and responsiveness. This research offers valuable insights for both theory and practice, providing a framework for enhancing leadership and communication strategies to drive employee success in fast-paced, competitive environments.

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