

Unravelling Older Adults' Continuance Intention on Social Networking Sites Through the Lens of SOR Theory: Older Adults' Continuance Intention on Social Networking Sites

Tze Ha Chew¹, Christie Pei-Yee Chin^{1*}, Stephen L. Sondoh Jr.²

¹ Faculty of Computing and Informatics
Universiti Malaysia Sabah, MALAYSIA

² Faculty of Business, Economics and Accountancy
Universiti Malaysia Sabah, MALAYSIA

*Corresponding Author: peiyee@ums.edu.my

DOI: <https://doi.org/10.30880/jtmb.2024.11.02.008>

Article Info

Received: 16 August 2024

Accepted: 24 September 2024

Available online: 10 December 2024

Keywords

Social networking sites, continuance use, older adults, Facebook

Abstract

The rise of social networking sites (SNS) has transformed the digital landscape, especially for older adults. While previous studies have explored various theoretical frameworks like the Technology Acceptance Model (TAM) and Social Support Theory (SST), there is a need for a deeper understanding of older adults' motivations and behaviours on these platforms. This study addresses this gap by applying the Stimulus–Organism–Response (SOR) theory to examine how older adults' perceptions influence their continued use of SNS. This framework considers various factors such as platform quality (PQ), content quality (CQ), knowledge self-efficacy (SE), and social connectedness (SC). It also incorporates perceived enjoyment (PE), self-disclosure (SD), and subjective well-being (WB) as internal states, with SNS continuous use intention (SU) as the ultimate response. Additionally, the study includes habit (HB) as a mediator in the relationship between subjective well-being and SNS continuous use intention. Survey data from 190 older adults in Sabah, Malaysia, were collected for this study, and partial least squares structural equation modelling (PLS-SEM) was employed to validate the proposed framework. PQ, CQ, and SE significantly and positively affect WB and PE. SC positively impacts PE but is not significant with WB. WB mediates the relationships between PQ, CQ, SE, and SU. Additionally, HB mediates the effect of WB on SU. In conclusion, this study emphasises the transformative potential of technological solutions within SNS, offering practical implications for creators and providers. It contributes to developing effective strategies to enhance the SNS experiences of older adults.

1. Introduction

The use of social networking sites (SNS), such as Facebook and Instagram, among older adults has experienced unprecedented growth in recent years. In contrast to younger users, older people engage on these platforms to maintain relationships, improve mental well-being, gain independence, combat isolation, and become more socially engaged (Newman et al., 2021). However, the challenges of SNS use among older adults are due to a lack of interest, difficulty learning new technologies, or limited device access (Chen et al., 2023). Therefore, a deeper understanding of their continuance use on these online platforms is necessitated to maximise the benefits and

This is an open access article under the CC BY-NC-SA 4.0 license.



address the challenges of SNS use. Several theoretical frameworks, such as the Technology Acceptance Model (TAM), Uses and Gratifications Theory, and Social Cognitive Theory, are primarily employed to explain older adults' technology acceptance and continuance usage of SNSs. However, these frameworks examine the phenomenon of SNS continuance use from different lenses. Due to the dynamic nature of social media, a comprehensive model that integrates factors specifically addressing older adults' unique characteristics and challenges, such as social support, cognitive abilities, and well-being, is necessary. This study employs the Stimulus–Organism–Response (SOR) theory (Mehrabian & Russell, 1974) to leverage various environmental aspects of SNS that act as stimulus (S) to influence the internal psychological or cognitive states of older adult users in terms of the organism (O), which eventually leads to behavioural responses (R). By identifying specific stimuli for elderly adults and addressing organismic barriers of their unique characteristics that trigger their intention to continue using the platform, interventions can be tailored to enhance their SNS experience.

Since its development, SOR has been extended and applied to study different stimuli on individuals' behaviour or responses in various contexts. For example, SOR has been used to understand how the store atmospherics, product attributes, and advertising impact consumers' emotions, attitudes, and purchase behaviours (Guo et al., 2021); how interface design, usability, and online content affect users' cognitive and emotional responses, leading to different patterns of engagement and use (Kimiagari & Malafe, 2021); and how physical environments (e.g., urban design, workplace settings) influence individuals' mental states and behaviour (Zhang et al., 2021). Also, SOR has been applied to explore the influence of workplace stimuli, such as leadership style and organisational culture, on employees' emotions, job satisfaction, and performance (Herk & Pyo, 2020). This extensive application of SOR in marketing and consumer behaviour, human-computer interaction, environmental psychology and organisational behaviour demonstrates that the theory has been valuable in investigating the technology continuance use among older adults (e.g., Cao et al., 2022). The SOR theory emphasises that emotional and psychological factors align well with the inherent complexity of users' mental processes and the intertwined role of emotions in SNS usage, making it well-suited for capturing the nuanced internal states of older adults (Jin et al., 2023). Its adaptability and expansiveness allow the model to be tailored to the specific needs and experiences of older adults, thus providing insights into their unique patterns of SNS usage.

Previous studies have identified the essential role of older adults' platform quality, content quality, knowledge self-efficacy, and social connectedness in determining continuous use intention in the SNS. For example, platform quality, as a value judgment of older adults, is believed to be an essential factor that provides benefits and ease to the use of technology (Ramírez-Correa et al., 2023), and the quality of content can strengthen social connections (O'Brien & Yuan, 2018). Higher levels of knowledge self-efficacy are linked to higher SNS usage among older adults (Wang et al., 2015). Social connectedness allows people to establish trust (Kim & Shen, 2020). Our study aims to provide empirical evidence for how these different social media platform-related factors affect older adults' internal state in online SNS. Moreover, investigating the impact of older adults' cognitive and affective responses towards SNS enhances our understanding of their role in shaping users' continuance use behaviour. Thus, this study aims to answer these research questions: (1) What stimuli influence older adults' internal state, and how do they influence it? (2) How do these internal states affect continuance use intention? In summary, this study contributes to understanding SNS continuance use among older adults and demonstrates the practical application of the SOR theory in this context. By addressing older users' specific needs and experiences, this study can enhance the design and usability of SNS platforms, benefiting this demographic.

2. Theoretical Background

The Stimulus–Organism–Response (SOR) theory explains how environmental stimuli influence internal psychological states, affecting behavioural responses (Mehrabian & Russell, 1974). This study effectively employs the SOR theory to understand how stimuli from SNS (such as platform quality, content quality, knowledge self-efficacy, and social connectedness) influence older adults' internal states and continuous use intention. The utilisation of the SOR framework in this study is primarily justified for several vital reasons. Firstly, the SOR theory has been extensively employed in examining the continuous use intentions of SNS in various studies (Cao et al., 2022; Jo, 2022; Sharabati et al., 2022). Its wide-ranging application across fields such as consumer behaviour and online services underscores its relevance in understanding the intricacies of human behaviour (Yu et al., 2021), thus making it appropriate for investigating SNS usage patterns among older adults. The SOR theory, with its unique ability to leverage external stimuli to influence internal psychological or cognitive states, thereby shaping externally driven behaviours that manifest in individuals' final choices and actions (Zhang et al., 2021), offers a comprehensive perspective for analysing the impact of social media-related factors on the mental and cognitive states of older adults. This perspective is precious in deciphering the decision-making processes within contemporary digital platforms designed for older populations, thereby informing the design and implementation of these platforms. Given the inherent complexity of users' mental processes and the intertwined role of emotions in SNS usage (Chen et al., 2023), the SOR theory's emphasis on emotional and psychological factors aligns well

with capturing the nuanced internal states of older adults (Jin et al., 2023). Its ability to encapsulate the intricacies of these mental processes underscores its suitability for studying the emotional and cognitive dimensions of older adults engaging with SNS platforms, thereby providing a comprehensive understanding of their SNS usage behaviour. Lastly, the adaptability and expansiveness of the SOR theory enable it to encompass a broader research context within the SOR framework (Song et al., 2022). As a result, it can be used to explain users' inclinations, whether favourable or unfavourable, for digital media platforms.

2.1 Stimulus-Organism-Response (SOR) Theory

In this study, the SOR framework is applied to examine older adults' continuous use of SNS. The stimuli include platform quality, content quality, knowledge self-efficacy, and social connectedness. These factors affect the users' internal states, such as perceived enjoyment, self-disclosure, and subjective well-being, ultimately influencing their intention to use SNS.

Platform quality (PQ) refers to an SNS platform's perceived functionality, design, and usability (Ramírez-Correa et al., 2023). High platform quality enhances user satisfaction and encourages continuous use. Content quality (CQ) refers to the relevance, accuracy, and timeliness of the information shared on SNS (O'Brien & Yuan, 2018). Quality content fosters engagement and connection among users, enhancing their overall experience and intention to continue using the platform.

Knowledge self-efficacy (SE) is the confidence in one's ability to perform tasks related to SNS (Wang et al., 2015). Higher self-efficacy leads to greater use of SNS as users feel more competent in navigating and utilising these platforms effectively.

Social connectedness (SC) reflects how individuals feel connected to others within their social network (Ooi et al., 2020). This sense of belonging and interaction positively influences users' engagement and satisfaction with SNS, promoting continuous use.

2.2 Internal States: Perceived Enjoyment, Self-Disclosure, and Subjective Well-Being

Perceived enjoyment (PE) is the extent of pleasure and satisfaction derived from using SNS (Jin et al., 2023). Self-disclosure (SD) involves sharing personal information, thoughts, and feelings on SNS, which can strengthen social ties and trust among users (Kim & Shen, 2020). Subjective well-being (WB) encompasses overall life satisfaction and happiness influenced by SNS use (Zhang et al., 2021). These internal states mediate the relationship between external stimuli and the intention to continue using SNS.

Habit (HB) is how SNS use becomes automatic and routine (Cao et al., 2022). Habit mediates the effect of subjective well-being on continuance intention, as habitual use reinforces the benefits experienced from SNS, leading to sustained engagement.

3. Model Constructs and Hypotheses

The study confirmed that platform quality, content quality, and social connectedness positively influence perceived enjoyment, self-disclosure, and subjective well-being. However, knowledge self-efficacy has a complex relationship with these factors. The findings suggest that older adults' continuous use of SNS is driven by their internal states, which are shaped by external stimuli. The research model depicted in Figure 1 illustrates the three stimulus dimensions: technological, individual, and social stimulus, which are expected to impact older adults' organism experiences and, consequently, influence their response to SNS continuance use intention. To enrich the experiences of older adults on SNS, this study concentrates on organism variables, specifically examining perceived enjoyment, self-disclosure, habit, and subjective well-being that result from using SNS. Older adults' feedback helps identify areas where improvements are needed and provides insights into the preferences, challenges, and expectations of older adults using social networking sites. This data-driven approach allows developers and service providers to make informed adjustments and create a platform that's easier to use and better suited to older adults, ultimately enhancing their subjective well-being and engagement with the platform.

Researchers have shown significant interest in technological factors like platform quality, leading to the development and empirical testing of various measurement scales across different Information System environments. In the SOR context, some studies identified some measurements and aspects of website quality, including design quality, customer response, reliability, and security (Kim & Lennon, 2013; Saleem et al., 2022). However, in an SNS, platform quality refers to the appropriate technologies users have adopted regarding usability, reliability, and responsiveness (Chew et al., 2022b). This broader perspective acknowledges that, in the dynamic and interactive environment of SNS, platform quality is influenced by static website features and how well the technologies meet users' needs and expectations regarding user-friendliness, dependability, and responsiveness.

The second factor is content quality, which refers to the overall quality of communication content produced by the community or other users (Iranmanesh et al., 2022). It encompasses a variety of traits, including

appropriateness, usefulness, and relevance (Chew et al., 2023). According to Aslam and Luna (2021), content quality involves content that adds value, resolves issues, and showcases excellent writing and storytelling. However, O'Brien and Yuan (2018) discovered that the quality of content positively influenced weak connections and bridging social capital among older adults. They emphasised that SNS allow older adults to socialise, make friends with people they would not usually approach, and help shy people find a way out to create and foster relationships.

In this study, the individual factor of knowledge self-efficacy is defined as confidence in one's ability to provide knowledge (Zhou, 2018) and self-evaluate the content (Rahma & Setiasih, 2021) that is valuable to others. Knowledge self-efficacy has been studied in different domains. For instance, knowledge self-efficacy is a crucial factor that motivates people to share knowledge through online networks (Carpentier, 2021). Positive and enjoyable experiences, effective communication, and overall well-being contribute to a more confident and capable approach to learning and acquiring new knowledge. These factors, in turn, influence knowledge-sharing behaviours (Kankanhalli et al., 2005; Karna & Ko, 2022). Individuals who believe in their intellectual contributions and capacity to positively impact their teams are likelier to share knowledge and exchange personal information (Lin et al., 2020).

As a social factor, social connectedness reflects how much an individual feels connected to others, senses a community, and perceives meaningful relationships with fellow individuals (Sinclair & Grieve, 2017). For example, Teo and Lee (2016) tested the effect of other social factors, such as social connections, increasing life satisfaction in older adults. In addition, SNS can lead to positive mental health effects and reduce feelings of loneliness and social isolation in later life (Findlay & Nies, 2017). Moosa (2020) argues that social connectedness is an important determinant and has shown a positive correlation with well-being. Theoretically, social connectedness draws from social capital, emphasising that the quality of interaction is more important than quantity, and building a robust and satisfying relationship can help overcome loneliness and isolation (Barbosa Neves et al., 2019). Specifically, social connections positively influence multiple and interrelated health outcomes among older adults, protecting them from physiological sequelae (Hope et al., 2014). Previous studies identified the top three reasons people may likely use SNS for virtual social interactions: 1) to disseminate information, 2) to get social support, and 3) to build relationships (Ridings & Gefen, 2004; Singh et al., 2023). Users who interact with like-minded people will enjoy their participation more. As such, the study is expected to impact how valuable and enjoyable users find the site positively (Guan et al., 2022).

Consequently, the design and implementation of platform quality, content quality, knowledge self-efficacy, and social connectedness among older adults are essential for increasing the perceived enjoyment of SNS. By fostering a stimulating and enriching environment through these elements, social media can be developed into a valuable and supportive tool, contributing to SNS's overall enhancement and growth. Perceived enjoyment is an internal state factor resulting from the fun and excitement individuals gain when using SNS. In general, SNS is frequently used as relaxing entertainment, enabling users to experience pleasure when using the system. Gogan et al. (2018) explained that entertainment serves to maintain and restore mental health and enjoyment. In a recent study, the researchers found that platform quality is essential to the success of any IS, providing higher levels of convenience, quick feedback, and privacy (Jiang et al., 2023). Users may be more inclined to share personal information if it facilitates user interactions, streamlines procedures, or lessens friction (Sharif et al., 2021), helping them feel fulfilled and joyful (Seol et al., 2016). The current SNS environment offers various platforms, each catering to different needs and preferences, such as visual content sharing, professional networking, and video sharing. This content may enhance the user's enjoyment, thereby increasing their perception that the SNS is applicable and enjoyable (Iranmanesh et al., 2022). When individuals enjoy acquiring knowledge or engaging in community activities, it can boost their confidence to learn and understand new information. Positive and enjoyable learning experiences can enhance one's belief in their knowledge self-efficacy. However, Mouakket and Sun (2020) found that disclosure significantly affects people's perception of SNS usage, while information control is predicted according to personality trait levels. However, no study has examined how understanding knowledge self-efficacy might affect how much someone enjoys something, and the theoretical foundation for such a study has yet to be laid. Furthermore, if users can interact with like-minded people, they will enjoy their participation more. As such, the study is expected to impact how valuable and enjoyable users find the site positively (Guan et al., 2022). Based on the literature, the following hypotheses are developed:

H1: Platform quality (a), content quality (b), knowledge self-efficacy (c), and social connectedness (d) have a positive impact on the perceived enjoyment among older adults

The context of online self-disclosure is evolving due to technological advancements, with the nature of disclosed information becoming increasingly varied and widespread. Self-disclosure refers to individuals sharing their profiles, personal experiences, thoughts, and feelings with a public audience or community of users (Chen, 2017). For example, individuals may perceive a platform as having good quality if it provides a secure and trustworthy environment for self-disclosure (Nguyen et al., 2022). A platform that facilitates safe and meaningful

interactions can be seen as high quality, as it supports users in sharing personal information comfortably (Sharif et al., 2021). However, content quality can be influenced by how users interact with and engage with it. When users can share their thoughts, personal experiences or feedback related to the content, it may enhance their perception of its quality information (Kurt et al., 2021). Sharing one's thoughts and experiences with others, including in educational or knowledge-sharing contexts, can provide opportunities for feedback and validation. This can help individuals feel more confident communicating and conveying knowledge effectively, thus contributing to knowledge self-efficacy (Hayat et al., 2020). Opening up and disclosing information about themselves to others often leads to deeper and more meaningful connections. Sharing and self-disclosure reciprocity can enhance social connectedness (Lin et al., 2020). Therefore, this study hypothesises the following:

H2: Platform quality (a), content quality (b), knowledge self-efficacy (c), and social connectedness (d) have a positive impact on self-disclosure among older adults

The SOR theory asserts that subjective well-being with an IS positively impacts the continuance use intention (Yang et al., 2021). Based on that, subjective well-being in this context consists of cognitive happiness and life satisfaction (Yeşilyurt & Solpuk Turhan, 2020). It is also considered a good indicator of a personal assessment of an individual's quality of life (Medvedev & Landhuis, 2018). Users' overall well-being and satisfaction with a platform can impact their perception of its quality. A platform that contributes to users' happiness and satisfaction is likely to be viewed as having high quality. According to the IS Continue Model suggested by Masrom et al. (2021), cognitive reactions (life satisfaction, perceived collectivism, joy, and pleasure) directly impact users' continued intention of using IS. Several IS studies have confirmed this theoretical framework (e.g., Chen, 2017; Cho et al., 2019). Although the different roles of well-being have been investigated, very few studies have examined it as a mediator in another framework, such as stimulus-organism-response (SOR) theory, and there is a need to explore well-being, specifically subjective well-being (Attiq et al., 2022). For example, perceived information quality can impact satisfaction and purchase intention (Jayadi et al., 2022). Content contributing to users' happiness, satisfaction, or well-being is more likely to be viewed as high-quality (Gogan et al., 2018). Moreover, positive emotional experiences and overall well-being can foster a more optimistic outlook on learning and acquiring new knowledge (Zheng, 2022). Prifti (2022) argued that higher knowledge self-efficacy is a good predictor of satisfaction. Subjective well-being, which encompasses happiness, life satisfaction, and overall contentment, can influence social connectedness. Individuals who feel content and optimistic in social interactions are likelier to seek and maintain connections with others. Furthermore, the current findings are consistent with research suggesting that subjective happiness favourably relates to factors strongly associated with social connectedness (Satici et al., 2016). As a result, it is posited:

H3: Platform quality (a), content quality (b), knowledge self-efficacy (c), and social connectedness (d) have a positive impact on the subjective well-being of older adults

Although the term 'habit' is widely used to predict and explain behaviour, few studies have considered habit as a mediator within the SNS context. According to Appraisal Theory, emotion is the result of cognition that responds to an event or stimulus but depends on an individual's assignment to the event in the context of individual needs and coping potential (Kim & Lennon, 2013). This could explain why the same event may evoke different emotions in different individuals. Some researchers have investigated the relationship between cognitive and affective processes, finding that users' mental evaluations lead to their affective responses (Cui et al., 2021; Kim et al., 2020). Polites and Karahanna (2012) claimed that habits are both cognitive and affective. Mental habit means that a person consciously continues to use a system, even though it may not be the best. Affective habit is how users continue to use the system under pressure to change (Fraj-Andrés et al., 2022). Wamba et al. (2017) proposed that user spending on a website depends largely on their perception of utility gains. Recently, Mouakket (2015) and Amoroso & Lim (2017) suggested that habit mediates the association between satisfaction and continuance intention. Their study shows that cognition significantly impacts user emotions, and satisfaction with habits will trigger the habitual behaviour of SNS users and increase their willingness to continue using the website. This study defined mediation as a situation where subjective well-being significantly affected habits, substantially affecting SNS use.

Based on this argument, we argue that user satisfaction with previous experiences positively impacts users' willingness to continue using Facebook. Habit affects users' subjective well-being when the level of SNS usage becomes routine, and users are satisfied with the results (Chansanam et al., 2022). Therefore, it can be assumed that:

H4: Subjective well-being has a positive impact on (a) habit and (b) SNS continuous use intention among older adults

In the previous studies, continued intention (Jin et al., 2023; Sun et al., 2019; Yang & Zeng, 2018), commitment to SNS (Lin et al., 2020), emotional commitment (Gogan et al., 2020) have been employed as response factors. Thus, the variable we have taken in this study is SNS continuous use intention, which can be understood as the user's willingness to continue using an SNS in the future (Bhattacharjee et al., 2012). This view of Bhattacharjee has attracted the attention and research of many scholars.

Wu & Feng (2021) believed that the intention to continue using SNS might be due to subjective choice and difficulty in changing habits and should be included in the scope of the intention to continue using SNS. In addition, sustained usage intentions can be a good predictor of the actual usage of a technology or application (Amoroso & Lim, 2017).

In research on individual behaviour, a user's willingness to continue using SNS is strongly affected by their internal state. In individual behavioural research, users' desire to continue using SNS is deeply influenced by their internal state. When users decide to use SNS, they weigh the pros and cons in many ways. Users will strongly desire to buy only when the SNS provider allows users to understand and recognise the system entirely (Lin et al., 2021). For example, when older adults use SNS, they may not have a strong desire to use it initially. Still, they will continue to use it after watching social media content or interactions. Yang and Zeng (2018) argued that good value is more critical than hedonic value in influencing perceived value and continuous use intention. Gogan et al. (2018) explore the factors affecting users' satisfaction, emotional commitment to using Weibo in China, and continuous use intention. Gu et al. (2016) integrated the uses and gratifications theory with perceived complementarity. Their empirical findings found that interpersonal communication and information aspects significantly affect users' intention to multi-home on SNS. Therefore, it is easy to argue that SNS behavioural intention is an antecedent to increasing social capital (Erickson, 2011), receiving support (Bélanger et al., 2016), improving social life (Zhou, 2018), and independence (Ramírez-Correa et al., 2019). Although many users understand that those who are more involved and participatory might form a firm SNS continuous use intention, it should be admitted that SNS intentions refer to usage behaviours (Ching et al., 2016) and thinking about such activities.

In a recent study, the researchers found some variables that predict enjoyment, such as interaction and the ubiquity of a strong effect of perceived enjoyment on SNS intention (Jung et al., 2015). Additionally, users who participate in social media report experiencing enjoyment (Lee & Chen, 2021) and other beneficial outcomes that have the potential to result in feelings of joy among older adults (Marcelino et al., 2016). These benefits to users often result in responses such as satisfaction (Ofori et al., 2015), intention to use (Cho & Son, 2019; Salkind, 2010), bonding social capital, and bridging social capital (Kim et al., 2019). Thus, if individuals enjoy using a hedonic IS, they are more likely to think about life satisfaction and continue to engage with it (Seol et al., 2016). Furthermore, having utilitarian and hedonistic values significantly influences user satisfaction. Indeed, SNS also offers an entertainment value proposition that attracts many users. For example, older adults often use social media to reduce loneliness (Chopik, 2016; Czaja et al., 2018) and have some fun (Kim et al., 2019). This study considers perceived enjoyment as an emotional construct expected to affect both SNS use and subjective well-being positively. Thus, we hypothesised:

H5: Perceived enjoyment has a positive impact on SNS continuous use intention among older adults

Computer-mediated communication can be characterised by superior levels of self-disclosure, which means it enables contact to be made visible, actors to see the effort of communication, and the socio-material context visible and accessible from social interactions. Users revealing their profiles and personal experiences on platforms like Facebook can experience benefits, contributing to overall well-being and as a vital tool for reconnecting with family and friends (Nguyen et al., 2022). However, individuals with guarded personalities may prefer limited disclosure within smaller, close circles. The inclusive prioritisation of self-disclosure in virtual environments fosters respect, integration, and better social interactions, ultimately influencing users' commitment to Social Networking Sites (SNS) (Lin et al., 2020; Sharif et al., 2021). This study posits that the evolving scenario of online self-disclosure and its considerable impact on users' continuation intentions on SNS underscores the need for ongoing exploration and understanding of these dynamics. Therefore, this study hypothesises the following:

H6: Self-disclosure positively impacts SNS continuous use intention among older adults

Habits have been included in persistent intent models to explain IT usage behaviours as consumers frequently use these devices, and their behaviours become automated (Limayem et al., 2007). However, there is no single or standard definition for the term 'habit' by researchers who view it differently. It is understood as an automated action with more influence (Verplanken & Aarts, 1999), habitual behaviour resulting from the cue (Limayem & Hirt, 2003), and interactive effects of habit while adopted as an antecedent of intention (Braun, 2013). However, in this context, habits mean that users automatically participate (Hsiao et al., 2016) and provide life experience; it becomes a convenient and 'necessary' habit (Kurz et al., 2015). Others have considered it an intention-behaviour

moderator. For example, Hsu et al. (2015) explored the relationship between repeat online purchase intention and the moderating role of habit. They found that the habit of online shopping increases if the intention to repeat purchases is more vigorous. Chen et al. (2015) expanded the ECM (Expectation-Confirmation Model) to explain why teachers continue using teaching blogs. The results show that user confirmation, satisfaction, and perceived usefulness collectively predict the intention to continue using blogs, with the moderating effect of habit enhancing this prediction. Therefore, this study hypothesises the following:

H7: Habit has a positive impact on SNS continuous use intention among older adults

This study investigates how stimulus factors (platform quality, content quality, knowledge self-efficacy, and social connectedness) influence the intention to continuously use SNS through perceived enjoyment, self-disclosure, habit, and subjective well-being. While many studies have explored the direct effects of these stimulus factors on perceived enjoyment, self-disclosure, habit, and subjective well-being, as well as their subsequent impact on the intention to continue using SNS, few have focused on and demonstrated the mediating roles of these factors (Amoroso & Lim, 2017; Mokha & Kumar, 2022; Nguyen et al., 2022; Yin et al., 2023). Moreover, there needs to be more literature regarding how habit influences the relationship between SNS usage variables, subjective well-being, and the intention to continue using SNS (Mouakket, 2015). This study addresses this gap by examining the mediating effects of perceived enjoyment, self-disclosure, habit, and subjective well-being. Understanding these mediating influences will provide deeper insights into how SNS usage characteristics impact continuous use intention. Based on this, we propose the following assumptions (the conceptual model is depicted in Figure 1):

H8: (a) Perceived enjoyment, (b) self-disclosure, and (c) subjective well-being mediate the relationship between platform quality and SNS continuous use intention

H9: (a) Perceived enjoyment, (b) self-disclosure, and (c) subjective well-being mediate the relationship between content quality and SNS continuous use intention

H10: (a) Perceived enjoyment, (b) self-disclosure, and (c) subjective well-being mediate the relationship between knowledge self-efficacy and SNS continuous use intention

H11: (a) Perceived enjoyment, (b) self-disclosure, and (c) subjective well-being mediate the relationship between social connectedness and SNS continuous use intention

H12: Habit mediates the relationship between platform quality and SNS continuous use intention

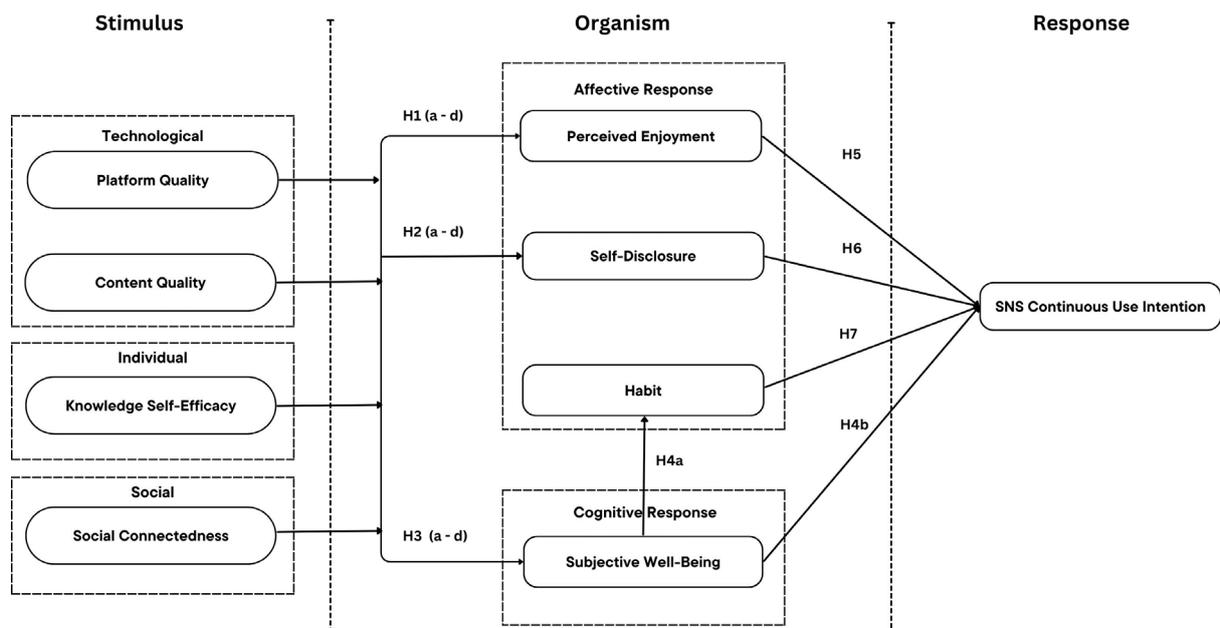


Fig. 1 Proposed research model

4. Methodology

In Part Two of the questionnaire, the constructs measured include platform quality, content quality, knowledge self-efficacy, and social connectedness, providing a holistic view of factors influencing SNS continuance behavior. The first part focused on the participants' demographic profile, encompassing questions about gender, age, education level, and usage pattern. The second part centred around the constructs being studied. Structural

equation modelling (SEM) was employed for this research model to test its validity. To create the instrumentation for this study, validated instrumental measurements from previous studies were adapted, ensuring their relevance and appropriateness for the current sample under investigation. Minor adjustments in wording were made to enhance the respondents' understanding and ensure cultural appropriateness, using words suitable for Facebook use in the Malaysian cultural context. Table 1 displays item loadings mostly above 0.7 on their constructs. Loadings range from 0.729 to 0.922. PQ1 and CQ1 were removed due to low indication loading. The measurement questionnaire yielded 33 items, presented in its final form using a Likert scale with five response options, allowing participants to indicate their agreement or disagreement with each item.

4.1 Data Collection

The data gathering method used in this study was self-administered questionnaires. Responders who have Facebook profiles were shared with the web application Google Forms. Furthermore, this study employed the convenience sampling approach as a survey instrument. Convenience sampling was selected not only for its cost-effectiveness but also because it allows easy access to a target population (Golzar et al., 2022). In this case, older adults actively use SNS platforms, which aligns with the exploratory nature of the study. The questionnaire was distributed to older adults (aged 50+) in the west coast division of Sabah, Malaysia. One hundred ninety completed questionnaires were collected between 15 June and 15 September 2022 from 80 men and 110 women between 50 and 70. Moreover, 82% of participants work full-time, while 18% are retirees or stay-at-home spouses. Regarding educational background, about 58% of the respondents had a bachelor's degree, and 32% had a master's degree or above. Among the most used features on Facebook for the participants were chatting, messaging, or using the "Like" button (see Table 1).

Table 1 Descriptive statistics

Variables	Category	Number	Percentage (%)
Gender	Male	80	42%
	Female	110	58%
Age	50 - 59	135	71%
	60 - 69	49	26%
	over 70	6	3%
Education	High school or below	48	25%
	College or university	110	58%
	Postgraduate or above	32	17%
Occupation	Working	155	82%
	Housewife/Retiree	35	18%
SNS Usage	Update Status	57	7%
	Posting/Sharing/Comment	184	23%
	Create group/event/gathering	42	5%
	Chat/Message/"Like"	303	39%
	News Feed	126	16%
	Searching	14	2%
	Others	60	8%

4.2 Measurement Model

In evaluating the measurement model of this study, three general dimensions, content validity, construct reliability, and discriminant validity, are considered (Bagozzi, 1979). To ensure the constructs' content validity, a pre-test with a small group of respondents was conducted to assess the questionnaire and to revise it before the survey was distributed. Further, the reliability and validity of each construct in this study are assessed using Cronbach's alpha reliability coefficient. Cronbach's alpha values were used to ensure internal consistency across the constructs, with all values above 0.70 indicating reliability. Composite Reliability (CR), which reflects the internal consistency of latent variables, was also evaluated, confirming construct reliability. Convergent validity is based on Composite Reliability (CR) and the Average Variance Extracted (AVE). Gao, Yang, et al. (2015) agreed that Bagozzi & Yi (2012) proposed the following three metrics: (1) factor loadings, where values above 0.5 for all

items are acceptable, (2) CR values greater than 0.7 are permitted, and (3) AVE values should be more than 0.5 for each construct.

As shown in Table 2, all constructs were within acceptable limits. Table 3 displays the discriminant validity measures, utilising the HTMT (Heterotrait-Monotrait Ratio of Correlations) criterion proposed by Henseler et al. (2015). Two methods were applied: one as a criterion and the other as a statistical test. For the first criterion assessment, HTMT values were compared with established thresholds. According to Rasoolimanesh (2022) and Roemer et al. (2021), a preferable HTMT value should be below 0.85 or 0.9. Following Ric & Benazić (2022), a threshold of 0.9 for HTMT was applied, and all constructs met this criterion. Following Henseler et al.'s methodology, a bootstrapping statistical analysis was conducted to evaluate HTMT's validity. The confidence intervals for HTMT were computed through bootstrapping. Henseler et al. (2015) outlined that the presence of a value of 1 within the confidence range for the structural routes would indicate insufficient discriminant validity. The results in Table 3 demonstrate that all upper bounds of the 95% confidence intervals for HTMT are below the 0.9 or 0.85 thresholds. In conclusion, this study effectively confirms the satisfaction of the required discriminant validity criteria.

Table 2 *Conceptualisation of research constructs and items*

Item	Measurements	Factor Loading	Composite Reliability	AVE	Cronbach's Alpha
PQ2	Facebook operates reliably	0.801	0.834	0.625	0.700
PQ3	Facebook provides various features (e.g., groups, walls) for me to interact with others.	0.779			
PQ4	Facebook provide fast response to my inquiries	0.793			
CQ2	The information shared on Facebook is accurate	0.841	0.860	0.673	0.755
CQ3	The information shared on Facebook is well presented	0.850			
CQ4	The information shared on Facebook is related to the task given	0.767			
SE1	I can search new information on Facebook	0.772			
SE2	I can share useful information on Facebook	0.871	0.856	0.665	0.758
SE3	I can use helpful information on Facebook	0.801			
SC1	Using Facebook helps me stay connected with my friends.	0.854			
SC2	Using Facebook helps me maintain friendships with others.	0.917	0.857	0.670	0.746
SC3	There are several people at Facebook I trust to solve my problems	0.663			
PE1	The use of Facebook is fun	0.893			
PE2	The use of Facebook is pleasant	0.923	0.929	0.813	0.885
PE3	The use of Facebook is very entertaining	0.887			
SD1	I frequently post a status about my personal feelings, emotions, and thoughts	0.870			
SD2	I frequently create my own posts	0.887	0.918	0.788	0.866
SD3	I frequently post what happened to myself in daily life	0.907			
WB1	In most ways, my life is close to my ideal	0.812			
WB2	The conditions of my life are excellent	0.849	0.891	0.672	0.841
WB3	I am satisfied with my life	0.792			
WB4	So far I have gotten the important things I want in life	0.826			
HB1	Using Facebook is natural to me	0.891			
HB2	Using Facebook has become automatic to me	0.892	0.907	0.764	0.845
HB3	I must use Facebook	0.838			
SU1	I intend to continue my use of Facebook in the future	0.842			
SU2	I intend to increase my use of Facebook in the future	0.860	0.888	0.726	0.811
SU3	I will keep using Facebook as regularly as I do now	0.853			

Table 3 Discriminant validity (HTMT)

	CQ	HB	PE	PQ	SC	SD	SE	SU	WB
CQ									
HB	0.3865								
PE	0.5541	0.5436							
PQ	0.7845	0.3419	0.6343						
SC	0.4774	0.6594	0.599	0.5213					
SD	0.4189	0.5037	0.2997	0.3467	0.485				
SE	0.5091	0.4964	0.7298	0.6195	0.619	0.1982			
SU	0.5006	0.8558	0.4719	0.5534	0.5642	0.602	0.2854		
WB	0.5008	0.271	0.4014	0.5424	0.3315	0.2396	0.1591	0.3728	

Noted: PQ: platform quality; CQ: content quality; SE: knowledge self-efficacy; SC: social connectedness; PE: perceived enjoyment; SD: self-disclosure; WB: subjective well-being; HB: habit; SU: SNS continuous use intention; Item PQ1 and CQ1 were dropped due to low factor loadings

4.3 Structural Model and Hypothesis

The hypothesised model is tested using SmartPLS; the results are shown in Figure 2 and Table 4. While the majority of hypotheses were confirmed, such as H1a, H1b, H1c, H1d, H2b, H2d, H3a, H3b, H3c, H4a, H4b, H6 and H7, and H2a, H2c, H3d, and H5 were rejected due to non-significant relationships.

Platform quality appeared to affect both perceived enjoyment ($\beta=0.177, t=2.064, p<0.001$) and subjective well-being ($\beta=0.297, t=4.088, p<0.001$). However, there was no significant effect on self-disclosure ($\beta=0.068, t=0.938, p>0.10$), leading to the rejection of H2a, while H1a and H3a were confirmed. Additionally, the effects of content quality on perceived enjoyment ($\beta=0.135, t=1.838, p<0.05$), self-disclosure ($\beta=0.227, t=2.509, p<0.01$), and subjective well-being ($\beta=0.257, t=3.239, p<0.01$) were confirmed, supporting H1b, H2b and H3b, respectively. However, the relationship between knowledge self-efficacy and self-disclosure ($\beta=0.082, t=1.412, p>0.05$) remains untested, and the relationship between perceived enjoyment ($\beta=0.377, t=5.560, p<0.001$) and subjective well-being ($\beta=-0.163, t=1.939, p<0.05$) revealed a contrast, rejecting H2c, while confirming H1c and H3c. Additionally, the effect of social connectedness on both perceived enjoyment ($\beta=0.200, t=2.759, p<0.01$) and self-disclosure ($\beta=0.343, t=4.592, p<0.001$) was confirmed, which leads us to accept H1d and H2d, but no subjective well-being ($\beta=0.145, t=0.089, p>0.05$), leading to the rejection of H3d. On the other hand, H4a, which holds that subjective well-being determines habit ($\beta = 0.247, t=2.731, p<0.01$), while H4b, which holds that subjective well-being determines SNS continuous use intention ($\beta=0.136, t=2.506, p<0.01$). Contrary to H5, the relationship between perceived enjoyment and continuous use intention was insignificant ($\beta=0.027, t=0.444, p>0.10$), thus not supporting its acceptance. Additionally, H6 and H7 were confirmed, indicating that self-disclosure ($\beta=0.225, t=3.801, p<0.010$) and habit ($\beta=0.567, t=8.297, p<0.001$) determine SNS continuous use intention.

Figures 1 and 2 illustrate the role of perceived enjoyment, self-disclosure, and subjective well-being as mediators linking the independent variables (platform quality, content quality, knowledge self-efficacy, and social connectedness) to SNS continuous use intention. A mediation analysis was conducted using the bootstrap technique with 5,000 bootstrap resamples and a bias-corrected 95% confidence interval to finalise the analysis. The study identified potential outcomes: if both the direct and indirect effects through the mediating variable are confirmed, it indicates partial mediation. Conversely, if the direct impact is absent but the mediation effect is present, it indicates complete mediation (Preacher & Hayes, 2008).

Subjective well-being partially mediates the relationship between platform quality and SNS continuous use intention (LL=0.007, UL=0.088), with a significant total effect ($\beta=0.102, p<0.001$) and indirect effect ($\beta=0.040, p<0.001$). Conversely, subjective well-being does not mediate the relationship between perceived enjoyment (LL=-0.013, UL=0.043), self-disclosure (LL=-0.016, UL=0.056), and SNS continuous use intention due to insignificant direct effects ($\beta=0.097, p>0.10; \beta=0.087, p>0.10$).

Additionally, Self-disclosure (LL=0.011, UL=0.112) and subjective well-being (LL=0.078, UL=2.016) partially mediate the relationship between content quality and SNS continuous use intention, with significant total and indirect effects ($\beta=0.126, p<0.001; \beta=0.051, p<0.001; \beta=0.035, p<0.001$). However, perceived enjoyment does not mediate the relationship between content quality and SNS use intention (LL=-0.011, UL=0.032) due to an insignificant direct effect ($\beta=0.122, p>0.10$).

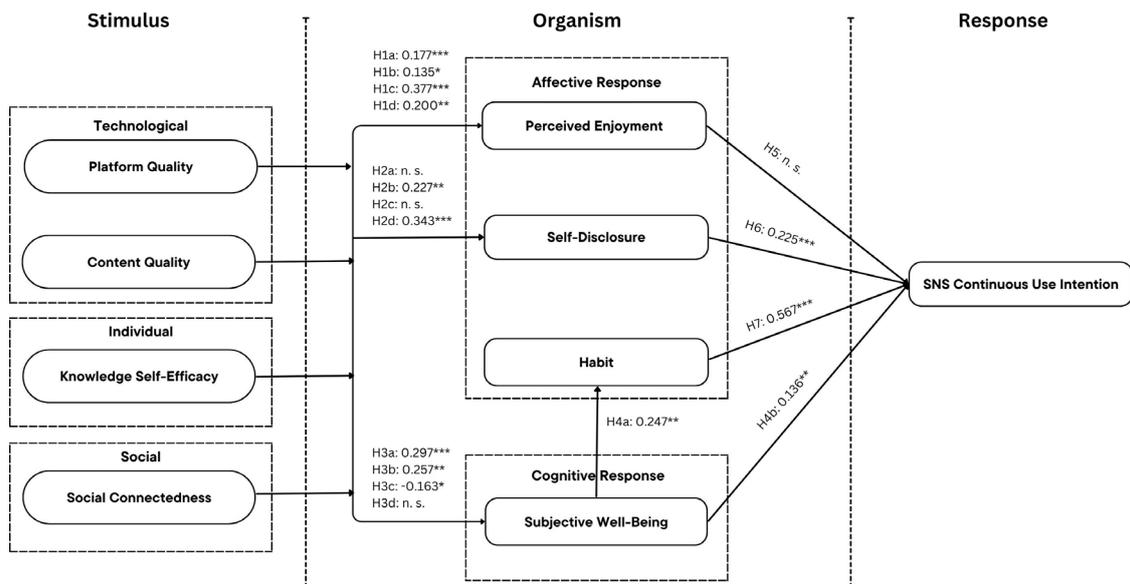
Surprisingly, no significant mediation was found between perceived enjoyment, self-disclosure, subjective well-being, and knowledge self-efficacy concerning SNS use intention due to insignificant total effect ($\beta=-0.061, p>0.10$) and indirect effects ($\beta=0.010, p>0.10; \beta=-0.026, p>0.10; \beta=-0.022, p>0.10$).

Regarding the last remaining stimuli, self-disclosure partially mediates the relationship between social connectedness and SNS continuous use intention (LL=0.138, UL=2.980), with significant total ($\beta=0.123$, $p<0.001$) and indirect ($\beta=0.077$, $p<0.001$) effects. Conversely, due to insignificant direct effects, social connectedness does not mediate perceived enjoyment or subjective well-being's influence on SNS use intention ($\beta=0.117$, $p>0.10$; $\beta=0.103$, $p>0.10$).

The additional mediator, habit, mediates the relationship between subjective well-being and SNS continuous use intention (LL=0.039, UL=0.233) with significant total and indirect effects ($\beta=0.276$, $p<0.001$; $\beta=0.140$, $p<0.001$).

The findings reveal partial mediation for relationships between subjective well-being, self-disclosure, and SNS continuance intention, highlighting that while internal states influence behavior, other factors such as habit also play a critical role. For a detailed breakdown, please refer to Table 5.

Fig. 1 Results of structural modelling analysis



Noted: n. s. = non-significant; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Table 4 Test of hypotheses based on path coefficient

Hypo	Relationship	Beta	Standard Deviation	T-Statistics	P Values	Result
H1a	Platform Quality - Perceived Enjoyment	0.177	0.086	2.064	0.020***	Supported
H1b	Content Quality - Perceived Enjoyment	0.135	0.073	1.838	0.033*	Supported
H1c	Knowledge Self-Efficacy -> Perceived Enjoyment	0.377	0.068	5.560	0.000***	Supported
H1d	Social Connectedness -> Perceived Enjoyment	0.200	0.073	2.759	0.003**	Supported
H2a	Platform Quality -> Self-Disclosure	0.068	0.072	0.938	0.174	Rejected
H2b	Content Quality -> Self-Disclosure	0.227	0.090	2.509	0.006**	Supported
H2c	Knowledge Self-Efficacy -> Self-Disclosure	-0.116	0.082	1.412	0.079	Rejected
H2d	Social Connectedness -> Self-Disclosure	0.343	0.075	4.592	0.000***	Supported
H3a	Platform Quality -> Subjective Well-Being	0.297	0.073	4.088	0.000***	Supported
H3b	Content Quality -> Subjective Well-Being	0.257	0.079	3.239	0.001**	Supported

H3c	Knowledge Self-Efficacy -> Subjective Well-Being	-0.163	0.084	1.939	0.026*	Supported
H3d	Social Connectedness -> Subjective Well-Being	0.145	0.108	1.347	0.089	Rejected
H4a	Subjective Well-Being -> Habit	0.247	0.090	2.731	0.003**	Supported
H4b	Subjective Well-Being -> SNS Continuous Use Intention	0.136	0.054	2.506	0.006**	Supported
H5	Perceived Enjoyment -> SNS Continuous Use Intention	0.027	0.062	0.444	0.329	Rejected
H6	Self-Disclosure -> SNS Continuous Use Intention	0.225	0.059	3.801	0.000***	Supported
H7	Habit -> SNS Continuous Use Intention	0.567	0.068	8.297	0.000***	Supported

Noted: *p<0.05; **p <0.01; *** p <0.001

Table 5 Mediating effects

Relationship	Hypo	Indirect effect	Direct Effect	Total Effect	Variance Account ed For (%)	Confidence Interval		t-Statistics	Result
						Lower	Upper		
Platform Quality -> Perceived Enjoyment -> SNS Continuous Use Intention	H8a	0.005	0.097	0.102	5%	-0.013	0.043	0.369	No
Platform Quality -> Self-Disclosure -> SNS Continuous Use Intention	H8b	0.015	0.087	0.102	15%	-0.016	0.056	0.852	No
Platform Quality -> Subjective Well-Being -> SNS Continuous Use Intention	H8c	0.040	0.062	0.102	40%	0.007	0.088	1.943	Partial
Content Quality -> Perceived Enjoyment -> SNS Continuous Use Intention	H9a	0.004	0.122	0.126	3%	-0.011	0.032	0.378	No
Content quality -> Self-Disclosure -> SNS Continuous Use Intention	H9b	0.051	0.075	0.126	41%	0.011	0.112	2.004	Partial
Content quality -> Subjective Well-Being -> SNS Continuous Use Intention	H9c	0.035	0.091	0.126	28%	0.008	0.078	2.016	Partial
Knowledge Self-Efficacy -> Perceived Enjoyment -> SNS Continuous Use Intention	10a	0.010	-0.071	-0.061	17%	-0.037	0.053	0.448	No
Knowledge Self-Efficacy -> Self-Disclosure -> SNS Continuous Use Intention	10b	-0.026	-0.035	-0.061	43%	-0.081	0.007	1.222	No
Knowledge Self-Efficacy -> Subjective Well-Being -> SNS Continuous Use Intention	10c	-0.022	-0.039	-0.061	36%	-0.067	0.000	1.329	No
Social Connectedness -> Perceived Enjoyment -> SNS Continuous Use Intention	11a	0.006	0.117	0.123	4%	-0.019	0.034	0.427	No
Social Connectedness -> Self-Disclosure -> SNS Continuous Use Intention	11b	0.077	0.046	0.123	63%	0.034	0.138	2.980	Partial
Social Connectedness -> Subjective Well-Being -> SNS Continuous Use Intention	11c	0.020	0.103	0.123	16%	-0.005	0.073	1.012	No
Subjective Well-Being -> Habit -> SNS Continuous Use Intention	12	0.140	0.136	0.276	51%	0.039	0.233	2.845	Partial

Noted: Bold = significant association (p<0.001)

5. Discussion and Findings

5.1 Direct Effect

This study addresses a gap in the current literature by applying a stimulus–organism–response (SOR) model to explore the factors influencing the use of SNS among older adults. It explicitly examines platform quality, content quality, knowledge self-efficacy, and social connectedness. It also investigates perceived enjoyment, self-disclosure, subjective well-being, and the additional mediator, habit, of SNS continuous use intention.

The findings underscore the importance of incorporating measures that capture stimuli, internal states (perceived enjoyment, self-disclosure, subjective well-being, and habit), and their responses. The organism (internal states) is a determining factor influencing SNS continuous use intention. To explore these aspects, this study uses a SOR model to analyse stimuli, perceived enjoyment, self-disclosure, subjective well-being, and habit impacting older adults' decision-making processes, specifically focusing on developing behavioural SNS continuous use intention, such as on Facebook in Sabah, Malaysia.

This comprehensive understanding, derived from our study, clarifies older adults' intentions and behavioural patterns about these resources, helping to determine whether they encourage, strengthen, or inhibit such behaviour. Analysing each stimulus's influence on perceived enjoyment, self-disclosure, subjective well-being, and habit reveals nuanced results. For instance, while platform quality is not a determining factor for self-disclosure (H1b), it plays a crucial role in enhancing perceived enjoyment (H1a) and subjective well-being (H1c). This suggests that older adults experience greater joy when the SNS provides more helpful information and is easy to use, aligning with previous studies (Do et al., 2020).

Moving to the next component, content quality shows a positive relationship with perceived enjoyment (H2a), self-disclosure (H2b), and subjective well-being (H2c), aligning with findings from other studies (Aslam & Luna, 2021; Brewer & Piper, 2016; Ramadhan et al., 2021; Rather, 2019). These results indicate that certain elements, such as meaningful engagement, enjoyment, excitement, and fun, determine the perceived enjoyment of using SNS, making users more likely to engage in social disclosure and express satisfaction. Our study's findings further validate and build upon these existing research findings.

Furthermore, leveraging insights from user engagement should allow for the personalised recommendation of specific older adult attractions through SNS. By analysing user interactions and content preferences, recommendations for older adult attractions can be tailored to individual interests and current trends, enhancing the overall user experience.

On the other hand, knowledge self-efficacy shows a positive relationship with perceived enjoyment and subjective well-being (H3a and H3c) but rejects self-disclosure (H3b). Studies have yet to examine how perceived enjoyment affects knowledge self-efficacy, making this relationship entirely new and unexplored. The SNS, with diverse and differentiated knowledge self-efficacy symbols (confidence to use and navigate the platform effectively, share information, etc.), can be perceived as a dynamic and empowering environment. Users with a high level of knowledge self-efficacy may find the platform more enjoyable and conducive to a positive sense of well-being, fostering a sense of mastery and satisfaction in their online interactions.

Surprisingly, knowledge self-efficacy is found to have a negative association with subjective well-being, contrary to the unsupported H3b. This unexpected outcome may be attributed to individuals with high knowledge self-efficacy focusing more on personal learning and knowledge pursuits, potentially reducing the emphasis on social interactions. This lack of social connection could contribute to lower levels of subjective well-being. For instance, older individuals lacking self-efficacy tend to be less inclined to share personal information and limit online self-disclosure (Musetti & Corsano, 2021). Consequently, older individuals' trust in the expertise and knowledge provided by others on the platform significantly shapes their usage patterns within SNS.

Moreover, when older adults have enriching and satisfying experiences on SNS, they are likely to develop a more positive attitude towards the platform and show a greater willingness to return. Consequently, knowledge self-efficacy can play a crucial role in enhancing both perceived enjoyment and subjective well-being, thereby positively influencing the attraction and retention of older adults on SNS. This makes it a fundamental consideration for SNS providers. Specifically, creators and providers can enhance service by considering older adults' education and knowledge background to better adapt to their tastes and preferences, offering a superior experience.

Moving to the last stimulus, social connectedness has been shown to influence perceived enjoyment and self-disclosure but not subjective well-being, leading to acceptance of H4a and H4b and rejection of H4c. This suggests that social connectedness is not directly linked to subjective well-being in the context of SNS. However, other studies have demonstrated its positive impact, particularly during COVID-19 (Yang et al., 2021). These findings imply that the opinions of family and acquaintances regarding SNS can significantly influence user satisfaction. While most studies report a strong positive relationship (Khizar et al., 2021; Satici et al., 2016), some have found the effect insignificant (Shaikh & Pratika, 2022).

In terms of relationships between perceived enjoyment, self-disclosure, subjective well-being, habit, and SNS continuous use intention, this study found positive associations between self-disclosure, subjective well-being, and habit with SNS continuous use intention (H4b, H6, and H7). Older individuals value information disclosure through SNS, are familiar with platform features and social interactions, express satisfaction, and are more likely to have continuous use intentions. These findings align with previous studies (Busch et al., 2021; Hossain & Kim, 2018; Lin et al., 2020; Suhud et al., 2021; Allan et al., 2021).

A positive relationship has also been identified between subjective well-being and habit (H4a). Older adults who experience greater satisfaction with SNS tend to develop more vital habits. This finding is consistent with earlier research (Amoroso & Lim, 2017; Mouakket, 2015). Emotion marketing strategies could improve the interactive experience with advanced technology to enhance this relationship further. For instance, older adults could explore SNS through virtual 3D environments, where sounds and sensations elevate their perception of platform quality, content quality, knowledge self-efficacy, and social connectedness. This immersive approach would recreate the online community space, enabling them to explore the full range of services offered on SNS. As a result, this could create a memorable emotional experience, encouraging continued use of SNS.

In conclusion, this study demonstrates that the SOR model's components (platform quality, content quality, knowledge self-efficacy, and social connectedness) justify achieving 57.5% of SNS continuous use intention. This finding underscores the relevance and effectiveness of applying SOR theory in the context of SNS, highlighting how both external stimuli and internal states play a crucial role in influencing user behaviour.

5.2 Mediation Effect

Perceived enjoyment plays a critical role in user experiences on SNS. However, it does not directly mediate the relationships between platform quality (H8a), content quality (H9a), knowledge self-efficacy (H10a), and social connectedness (H11a) with SNS continuous use intention. Studies suggest that while platform quality can enhance enjoyment, it may not translate into sustained usage, implying that users may seek additional factors beyond enjoyment to drive their continued engagement (Seol et al., 2016). Similarly, irrelevant or uninteresting content on SNS can diminish user interest and willingness to engage, irrespective of the level of enjoyment experienced while using the platform (Amir et al., 2022). Even though high knowledge self-efficacy can lead to enjoyment, it does not necessarily result in continued usage (Chao, 2019). Furthermore, while social connectedness and shared interests may foster enjoyable experiences, this alone does not drive continuous use (Cho & Son, 2019). This indicates that perceived enjoyment, although significant, may not be the sole determinant of users' intentions to use SNS continuously.

Our research highlights the practical implications of self-disclosure in SNS continuous use intention. Self-disclosure positively influences the relationship between content quality (H9b) and social connectedness (H11b) with SNS continuous use intention. With more opportunities to share personal information, older adults benefit from self-disclosure in fostering peer commitment and relationships (Chang et al., 2018; Yu et al., 2016). However, self-disclosure does not mediate the impact of platform quality (H8b) and knowledge self-efficacy (H10b) on continuous use intention, contrasting with prior research (H. Chen, 2017; Lim & Ahmad Ishak, 2018). This aligns with Eitiveni et al. (2023), who found that a lack of trust in information providers reduces self-disclosure likelihood. Additionally, individuals can thrive on SNS regardless of their self-disclosure levels, relying instead on their confidence in navigating and utilising the platforms (Kasmani et al., 2022).

In contrast, subjective well-being mediates the relationships between platform quality (H8c) and content quality (H9c) with SNS continuous use intention. Platforms that provide relevant information quickly, timely feedback, and personalised experiences contribute to user satisfaction and a positive user experience, leading to sustained usage intentions (Hossain & Kim, 2018; Sharabati et al., 2022). However, subjective well-being does not mediate the relationships between knowledge self-efficacy (H10c) and social connectedness (H11c) with SNS continuous use intention. This suggests that factors beyond well-being, such as individual motivations and preferences, may significantly influence users' intentions to continue using SNS (Do et al., 2020; Zhao et al., 2022).

The mediation of habit (H12) and subjective well-being with SNS continuous use intention was assessed, revealing that subjective well-being is associated with SNS use. When users extensively use SNS out of habit, it stimulates their willingness to continue using it. For instance, Mouakket (2015) suggested that habit mediated the relationship between satisfaction and continuance intention in the context of SNS. However, only a few studies (Amoroso & Lim, 2017) have attempted to explore the mediating role of habit in the SNS setting, indicating a need for further research to validate this relationship. The widespread prevalence and significance of Facebook usage have profoundly impacted people's lives and well-being (Pornsakulvanich, 2018). Acknowledging certain limitations is crucial. Firstly, the research model and hypotheses were tested only with older adults from the west coast division of Sabah, Malaysia, and may partially represent the entire ageing adult population in the state. Secondly, data were collected using a self-reporting method through SNS usage logs, which may not capture nuanced details and could be subject to biases. Additionally, the small sample size may limit the generalizability of findings to other settings. The benefits of using SNS may accrue incrementally, and excessive usage may lead to

unfavourable rather than beneficial outcomes, emphasising the need for careful consideration of technology addiction in future research.

6. Conclusion and Future Research

This study aimed to unravel the factors influencing older adults' continuous use of social networking sites (SNS) by applying the Stimulus-Organism-Response (SOR) theory. The results demonstrated that external factors such as platform quality, content quality, and knowledge self-efficacy positively affect older adults' internal states, such as perceived enjoyment, self-disclosure, and subjective well-being. These internal states, in turn, significantly impact their intention to continue using SNS platforms. One of the key findings is that platform and content quality have a substantial influence on subjective well-being, which acts as a crucial mediator in fostering sustained engagement with SNS. Social connectedness was also shown to enhance self-disclosure, enabling older adults to feel more connected and engaged on the platform. Habit emerged as a strong reinforcing factor, as the habitual use of SNS enhances the benefits older adults derive from these platforms, further strengthening their continued use intention. These insights provide practical implications for SNS developers and service providers. By improving platform usability, ensuring high-quality content, and fostering environments that encourage social connectedness, SNS platforms can better meet the needs of older adults and encourage their long-term engagement. Additionally, enhancing older adults' digital literacy and providing tailored content can further improve their self-efficacy and satisfaction. However, there are still areas for further research. First, while the SOR theory has been widely applied in marketing contexts, its use in studying older adults' digital behaviors is still emerging. Future work could incorporate recent findings on digital well-being to enrich the theoretical framework further. Additionally, exploring moderating factors such as age, gender, or digital literacy could provide deeper insights into how different segments of the older adult population experience and use SNS platforms. Second, the sample was not randomly selected, which may introduce self-selection bias, as respondents who completed the survey may differ from those who did not. To address this, future studies could use objective measures such as SNS usage logs or behavioural analytics to complement self-reported data, mitigating potential biases. Additionally, while the sample size was appropriate for this exploratory study, future research should aim to include a more diverse population of older adults across different regions, potentially increasing the generalizability of the findings. Expanding the sample beyond the West Coast Division of Sabah would also allow for cross-cultural comparisons and a more comprehensive understanding of SNS use among older adults in other regions. Third, the study did not employ a longitudinal design, which limits the ability to establish causal relationships. Future research could adopt longitudinal approaches to track how habits develop over time and how SNS usage behaviours evolve, particularly in relation to the stimuli and organismic factors identified in this study. This could provide richer insights into the formation of habits and long-term SNS engagement among older adults. Fourth, although this study focuses solely on older adults, future studies should replicate the framework with younger users (under 45) across different cultural settings. For instance, previous research by Nam et al. (2023) highlighted that socialisation, fashion, entertainment, and branding positively influence young people's consumption behaviour. Comparing generational differences could reveal whether the same stimuli and internal states affect SNS continuance intention differently across age groups. Fifth, this study did not explore moderating variables such as age, gender, or digital literacy. Future research should incorporate these factors to provide a nuanced understanding of how different demographic characteristics affect SNS continuance intention. These moderating variables could reveal significant differences in how different subgroups interact with and respond to SNS platforms. Finally, this study focuses primarily on the positive aspects of SNS use among older adults and lacks an exploration of negative consequences such as technology addiction, digital fatigue, or mental health issues. Future studies should delve deeper into these negative outcomes, especially in vulnerable populations like older adults, and consider additional emotional or cognitive responses such as trust and loneliness. Understanding both the benefits and risks of SNS use will provide a more holistic view of older adults' engagement with these platforms.

Acknowledgement

We appreciate the support of participants (aged 50 and above) in Sabah for their willingness to fill out the questionnaire

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

Chew: Conceptualization, Methodology, and Writing Original draft, Formal analysis. Chin: Methodology, review, and editing, Sondoh Jr.: Data curation, Methodology, Visualization.

References

- Amir, A., Hafizan, N., Anuar, N., Asyraff, M., & Shahril, Z. (2022). The Influence of Instagram Travel Content on Intention to Visit Tourist Destinations. *International Journal of Academic Research in Business and Social Sciences*, 12.
- Amoroso, D., & Lim, R. (2017). The mediating effects of habit on continuance intention. *International Journal of Information Management*, 37(6), 693–702.
- Aslam, W., & Luna, I. R. D. (2021). The relationship between brand Facebook page characteristics, perceived value, and customer engagement behavior: An application of Stimulus-Organism-Response (SOR). *Revista Brasileira de Gestão de Negócios*, 23, 43-62.
- Attiq, S., Abdul Hamid, A. B., Khokhar, M. N., Shah, H. J., & Shahzad, A. (2022). “Wow! It’s Cool”: How brand coolness affects the customer psychological well-being through brand love and brand engagement. *Frontiers in Psychology*, 13, 923870..
- Bagozzi, R. P. (1979). The role of measurement in theory construction and hypothesis testing: toward a holistic model. *Conceptual and theoretical developments in marketing*, 15, 32.
- Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40 , 8–34.
- Barbosa Neves, B., Franz, R., Judges, R., Beermann, C., & Baecker, R. (2019). Can Digital Technology Enhance Social Connectedness Among Older Adults? A Feasibility Study. *Journal of Applied Gerontology*, 38(1), 49–72.
- Bélanger, E., Ahmed, T., Vafaei, A., Curcio, C. L., Phillips, S. P., & Zunzunegui, M. V. (2016). Sources of social support associated with health and quality of life: A cross-sectional study among Canadian and Latin American older adults. *BMJ Open*, 6(6), 11503.
- Bhattacharjee, A., Limayem, M., & Cheung, C. M. K. (2012). User switching of information technology: A theoretical synthesis and empirical test. *Information and Management*, 49(7–8), 327–333.
- Braun, M. T. (2013). Obstacles to social networking website use among older adults. *Computers in Human Behavior*, 29(3), 673–680.
- Brewer, R., & Piper, A. M. (2016, May). " Tell It Like It Really Is" A Case of Online Content Creation and Sharing Among Older Adult Bloggers. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 5529-5542).
- Busch, P. A., Hausvik, G. I., Ropstad, O. K., & Pettersen, D. (2021). Smartphone usage among older adults. *Computers in Human Behavior*, 121, 106783.
- Cao, Y., Qin, X., Li, J., Long, Q., & Hu, B. (2022). Exploring seniors’ continuance intention to use mobile social network sites in China: a cognitive-affective-conative model. *Universal Access in the Information Society*, 1-22.
- Carpentier, P. (2021). Understanding individual motivations among members of online communities. *Les Cahiers Du Numérique*, 17(1–2), 153–183.
- Chang, I. C., Chang, C. H., Lian, J. W., & Wang, M. W. (2018). Antecedents and consequences of social networking site knowledge sharing by seniors: A social capital perspective. *Library Hi Tech*, 36(4), 651–664.
- Chansanam, W., Tuamsuk, K., Kwiecien, K., & Oh, S. G. (2022). Korean-popular Facebook fan page analytics in Thailand. *International Journal of Electrical and Computer Engineering*, 12(5), 5291.
- Chao, C. M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in Psychology*, 10, 1652.

- Chen, C. P., Lai, H. M., & Ho, C. Y. (2015). Why do teachers continue to use teaching blogs? The roles of perceived voluntariness and habit. *Computers and Education*, 82(3), 236–249.
- Chen, H. (2017). Antecedents of positive self-disclosure online: an empirical study of US college students' Facebook usage. *Psychology Research and Behavior Management*, 10, 147–153.
- Chen, H. W. J., Marzo, R. R., Sapa, N. H., Ahmad, A., Anuar, H., Baobaid, M. F., ... & Abdalqader, M. A. (2023, May). Trends in health communication: social media needs and quality of life among older adults in Malaysia. In *Healthcare* (Vol. 11, No. 10, p. 1455). MDPI.
- Chew, T. H., Chin, C. P.-Y., & Leau, Y. B. (2022). Untangling Why Elderly People Use Facebook : A Qualitative Study. *PACIS 2022 Proceedings*, 277.
- Chew, T. H., Chin, C. P. Y., & Leau, Y. B. (2023). Untangling factors influencing social networking sites use among older adults: a literature review. *Universal Access in the Information Society*, 22(3), 687–698.
- Ng, S. Y., Ching, S. Y., Chung, Y. T., & Dee, C. Y. (2016). *Determinants of continuance usage intention of social network services in Malaysia* (Doctoral dissertation, UTAR).
- Cho, E., & Son, J. (2019). The effect of social connectedness on consumer adoption of social commerce in apparel shopping. *Fashion and Textiles*, 6(1), 14.
- Cho, W. C., Lee, K. Y., & Yang, S. B. (2019). What makes you feel attached to smartwatches? The stimulus–organism–response (S–O–R) perspectives. *Information Technology and People*, 32(2), 319–343.
- Chopik, W. J. (2016). The Benefits of Social Technology Use among Older Adults Are Mediated by Reduced Loneliness. *Cyberpsychology, Behavior, and Social Networking*, 19(9), 551–556.
- Wu, J., Liu, L., & Cui, T. (2021). What drives consumer website stickiness intention? The role of website service quality and website involvement. *International Journal of Services Technology and Management*, 27(3), 189–208.
- Czaja, S. J., Boot, W. R., Charness, N., Rogers, W. A., & Sharit, J. (2018). Improving Social Support for Older Adults Through Technology: Findings From the PRISM Randomized Controlled Trial. *Gerontologist*, 58(3), 467–477.
- Do, H. N., Shih, W., & Ha, Q. A. (2020). Effects of mobile augmented reality apps on impulse buying behavior: An investigation in the tourism field. *Heliyon*, 6(8).
- Eitiveni, I., Hidayanto, A. N., Dwityafani, Y. A., & Kumaralalita, L. (2023). Self-Disclosure on Professional Social Networking Sites: A Privacy Calculus Perspective. *Human Behavior and Emerging Technologies*.
- Erickson, L. B. (2011). Social media, social capital, and seniors: The impact of Facebook on bonding and bridging social capital of individuals over 65.
- Findlay, A. (2017). *Understanding Social Network Site Use for Social Connectedness Among Rural Older Adults* (Doctoral dissertation, Idaho State University).
- Wamba, S. F., Bhattacharya, M., Trinchera, L., & Ngai, E. W. (2017). Role of intrinsic and extrinsic factors in user social media acceptance within workspace: Assessing unobserved heterogeneity. *International Journal of Information Management*, 37(2), 1–13.
- Fraj-Andrés, E., Herrando, C., Lucia, L., & Perez, R. (2022). Students apprehension and affective inertia in a Twitter-based activity: Evidence form students of an economics degree. *The International Journal of Management Education*, 20(3), 100683.
- Gao, S., Yang, Y., & Krogstie, J. (2015). The Adoption of Smartphones Among Older Adults in China. *International Conference on Informatics and Semiotics in Organisations*, 112–122.

- Gogan, I. C., Boco, F. T., Tchidi, G. E., & Ali, R. (2020). Determinants of User-Pleasure and Emotional Commitment to Online Social Network Sites. *DEStech Transactions on Social Science, Education and Human Science*.
- Gogan, I. C., Zhang, Z., & Matemba, E. D. (2018). Impacts of gratifications on consumers' emotions and continuance use intention: An empirical study of Weibo in China. *Sustainability*, 10(9), 3162.
- Golzar, J., Noor, S., & Tajik, O. (2022). Convenience Sampling. *International Journal of Education and Language Studies*, 1(2), 72-77.
- Gu, R., Oh, L. Bin, & Wang, K. (2016). Developing user loyalty for social networking sites: A relational perspective. *Journal of Electronic Commerce Research*, 17(1), 1-21.
- Guan, Z., Hou, F., Li, B., Phang, C. W., & Chong, A. Y. L. (2022). What influences the purchase of virtual gifts in live streaming in China? A cultural context-sensitive model. *Information Systems Journal*, 32(3), 653-689.
- Guo, J., Li, Y., Xu, Y., & Zeng, K. (2021). How live streaming features impact consumers' purchase intention in the context of cross-border E-commerce? A research based on SOR theory. *Frontiers in psychology*, 12, 767876.
- Hayat, A. A., Shateri, K., Amini, M., & Shokrpour, N. (2020). Relationships between academic self-efficacy, learning-related emotions, and metacognitive learning strategies with academic performance in medical students: A structural equation model. *BMC Medical Education*, 20, 1-11.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115-135.
- Pyo, N. H. L. (2020). The application of stimulus-organism-response (SOR) theory for studying workforce contributions in the pineapple factories in Chiang Rai. *International Journal of Multidisciplinary in Management and Tourism*, 4(2), 88-102.
- Hope, A., Schwaba, T., & Piper, A. M. (2014). Understanding Digital and Material Social Communications for Older Adults. *Proceedings of the 23rd International Conference on Mobile Human-Computer Interaction*, 3903-3912.
- Hossain, M. A., & Kim, M. (2018). Does multidimensional service quality generate sustainable use intention for facebook? *Sustainability*, 10(7), 2283.
- Hsiao, C. H., Chang, J. J., & Tang, K. Y. (2016). Exploring the influential factors in continuance usage of mobile social Apps: Satisfaction, habit, and customer value perspectives. *Telematics and Informatics*, 33(2), 342-355.
- Hsu, M. H., Chang, C. M., & Chuang, L. W. (2015). Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan. *International Journal of Information Management*, 35(1), 45-56.
- Iranmanesh, M., Annamalai, N., Kumar, K. M., & Foroughi, B. (2022). Explaining student loyalty towards using WhatsApp in higher education: an extension of the IS success model. *The Electronic Library*, 40(3), 196-220.
- Jayadi, J., Putra, E. I., & Murwani, I. A. (2022). The Implementation of S-O-R Framework (Stimulus, Organism, and Response) in User Behavior Analysis of Instagram Shop Features on Purchase Intention. *Scholars Journal of Engineering and Technology*, 10(4), 42-53.
- Jiang, Q., Gu, C., Feng, Y., Wei, W., & Tsai, W.-C. (2023). Study on the continuance intention in using virtual shoe-try-on function in mobile online shopping. *Kybernetes*, 52(10), 4551-4575.
- Jin, D., Wan Abas, W. A., & Kamarudin, S. (2023). The Effects of Instagram Users' Gratification on Psychological Response, and Continued Usage Intention from the Perspective of Uses and Gratification and Stimulus-Organism-Response Theory. *International Journal of Academic Research in Business and Social Sciences*, 13(3), 90-109.

- Jo, H. (2022). Antecedents of continuance intention of social networking services (SNS): Utilitarian, hedonic, and social contexts. *Mobile Information Systems*, 2022(1), 7904124.
- Jung, T., & Chung, N. (2015). The impact of interaction and ubiquity on trust, benefits, and enjoyment in social media continuance use.
- Kankanhalli, A., Tan, B. C. Y., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly: Management Information Systems*, 29(1), 113–143.
- Karna, D., & Ko, I. (2022). The role of we-intention and self-motivation in social collaboration: Knowledge sharing in the digital world. *Sustainability*, 14(4), 2042.
- Kasmani, M. F., Aziz, A. R. A., & Sawai, R. P. (2022). Self-Disclosure on Social Media and Its Influence on the Well-Being of Youth. *Jurnal Komunikasi: Malaysian Journal of Communication*, 38(3), 272–290.
- Khizar, U., Nawaz, D., Haroon, M., & Mubarak, H. (2021). Moderating Role of Social Connectedness on Forgiveness and Subjective Happiness Among Adults. *IRASD Journal of Economics*, 3(3).
- Kim, C., & Shen, C. (2020). Connecting activities on Social Network Sites and life satisfaction: A comparison of older and younger users. *Computers in Human Behavior*, 105(December 2019), 106222.
- Kim, J., & Lennon, S. J. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention: Based on the stimulus-organism-response model. *Journal of Research in Interactive Marketing*, 7(1), 33-56.
- Kim, M. J., Lee, C. K., & Jung, T. (2020). Exploring Consumer Behavior in Virtual Reality Tourism Using an Extended Stimulus-Organism-Response Model. *Journal of Travel Research*, 59(1), 69–89.
- Kim, M. J., Preis, M. W., & Lee, C.-K. (2019). The effects of helping, self-expression, and enjoyment on social capital in social media: the moderating effect of avoidance attachment in the tourism context. *Behaviour and Information Technology*, 38(8), 760–781.
- Kimiagari, S., & Malafe, N. S. A. (2021). The role of cognitive and affective responses in the relationship between internal and external stimuli on online impulse buying behavior. *Journal of Retailing and Consumer Services*, 61(4), 102567.
- Kurt, K., Aktas, B., & Turan, A. (2021). Understanding Online Shopping Continuance Intention of Turkish Users: an Empirical Assessment. *Pamukkale University Journal of Social Sciences Institute*, 50, 144–160.
- Kurz, T., Gardner, B., Verplanken, B., & Abraham, C. (2015). Habitual behaviors or patterns of practice? Explaining and changing repetitive climate-relevant actions. *Wiley Interdisciplinary Reviews: Climate Change*, 6(1), 113–128.
- Lee, C. H., & Chen, C. W. (2021). Impulse buying behaviors in live streaming commerce based on the stimulus-organism-response framework. *Information (Switzerland)*, 12(6), 1–17.
- FERN, L. S., & ISHAK, S. Z. A. (2018). Trust and Other Factors that Drive Students' Self-Disclosure on Social Networking Sites (SNSs). *Trends in Undergraduate Research*, 1(1), h25-31
- Limayem, M., & Hirt, S. G. (2003). Force of Habit and Information Systems Usage: Theory and Initial Validation. *Journal of the Association for Information Systems*, 4(1), 3.
- Limayem, M., Hirt, S. G., & Cheung, C. M. K. (2007). How Habit Limits the Predictive Power of Intention: The Case of Information Systems Continuance. *MIS Quarterly*, 31, 705–737.
- Lin, C. Y., Chou, E. Y., & Huang, H. C. (2020). They support, so we talk: the effects of other users on self-disclosure on social networking sites. *Information Technology and People*, 34(3), 1039–1064.

- Lin, J., Li, T., & Guo, J. (2021). Factors influencing consumers' continuous purchase intention on fresh food e-commerce platforms: An organic foods-centric empirical investigation. *Electronic Commerce Research and Applications*, 50(3), 101103.
- Marcelino, I., Laza, R., & Pereira, A. (2016). SSN: Senior Social Network for Improving Quality of Life. *International Journal of Distributed Sensor Networks*, 12(7).
- Masrom, M. B., Busalim, A. H., Abuhassna, H., & Mahmood, N. H. N. (2021). Understanding students' behavior in online social networks: a systematic literature review. *International Journal of Educational Technology in Higher Education*, 18(6), 1–27.
- Medvedev, O., & Landhuis, E. (2018). Exploring constructs of well-being, happiness and quality of life. *PeerJ*, 6, e4903.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. The MIT Press, Cambridge.
- Mokha, A. K., & Kumar, P. (2022). Examining the Interconnections Between E-CRM, Customer Experience, Customer Satisfaction and Customer Loyalty: A Mediation Approach. *Journal of Electronic Commerce in Organizations*, 20(1), 1–21.
- Moosa, S. (2019). Social connectedness and wellbeing of ageing populations in small islands. In *Social Isolation-An Interdisciplinary View*. IntechOpen.
- Mouakket, S. (2015). Factors influencing continuance intention to use social network sites: The Facebook case. *Computers in Human Behavior*, 53, 102–110.
- Mouakket, S., & Sun, Y. (2020). Investigating the Impact of Personality Traits of Social Network Sites Users on Information Disclosure in China: the Moderating Role of Gender. *Information Systems Frontiers*, 22(6), 1305–1321.
- Musetti, A., & Corsano, P. (2021). Multidimensional self-esteem and secrecy from friends during adolescence: The mediating role of loneliness. *Current Psychology*, 40, 2381–2389.
- Nam, J., Kim, S., & Jung, Y. (2023). Elderly users' emotional and behavioral responses to self-service technology in fast-food restaurants. *Behavioral Sciences*, 13(4), 284.
- Newman, L., Stoner, C., & Spector, A. (2021). Social networking sites and the experience of older adult users: A systematic review. *Ageing and Society*, 41(2), 377–402.
- Nguyen, L., Phillips, C. V., Rodriguez, A., Young, A. R., & Ramdass, J. V. (2022). Relationships matter! Social safeness and self-disclosure may influence the relationship between perceived social support and well-being for in-person and online relationships. *Journal of Applied Social Psychology*, 52(12), 1211–1220.
- O'Brien, N., & Yuan, Y. (2018). Social Networking Site Use on Social Capital of Older Adults. *AMCIS 2018 Proceedings*.
- Ofori, K. S., Fianu, E., Larbi-Siaw, O., Gladjah, R. E., & Boateng, E. O. Y. (2015). Factors influencing the continuance use of mobile social media: The effect of privacy concerns. *Journal of Cyber Security and Mobility*, 105–124.
- Ooi, C. S., Siah, P. C., & Low, S. K. (2020). Intention to Use Social Networking Sites among Malaysian Chinese Older Adults. *Makara Human Behavior Studies in Asia*, 24(1), 47–55.
- Polites, G., & Karahanna, E. (2012). Shackled to the Status Quo: The Inhibiting Effects of Incumbent System Habit, Switching Costs, and Inertia on New System Acceptance. *MIS Quarterly*, 36, 21–42.
- Pornsakulvanich, V. (2018). Excessive use of Facebook: The influence of self-monitoring and Facebook usage on social support. *Kasetsart Journal of Social Sciences*, 39(1), 116–121.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.

- Prifti, R. (2022). Self-efficacy and student satisfaction in the context of blended learning courses. *Open Learning: The Journal of Open, Distance and e-Learning*, 37(2), 111-125.
- Rahma, L., & Setiasih, S. (2021). The impact of social media usage intensity on self-esteem: survey on emerging adulthood of instagram user. *KONSELI : Jurnal Bimbingan Dan Konseling (E-Journal)*, 8, 39-46.
- Ramadhan, F., Hurriyati, R., & Hendrayati, H. (2021). The Effect of Content Quality and Perceived Enjoyment on Subscribe Intention in YouTube Channel. *Proceedings of the 5th Global Conference on Business, Management and Entrepreneurship (GCBME 2020)*, 302-305.
- Ramírez-Correa, P. E., Arenas-Gaitán, J., Rondán-Cataluña, F. J., Grandon, E. E., & Ramírez-Santana, M. (2023). Adoption of social networking sites among older adults: The role of the technology readiness and the generation to identifying segments. *PLoS ONE*, 18(4 4), 1-21.
- Ramírez-Correa, P., Grandón, E. E., Ramírez-Santana, M., & Órdenes, L. B. (2019). Explaining the use of social network sites as seen by older adults: The enjoyment component of a hedonic information system. *International Journal of Environmental Research and Public Health*, 16(10) 1673
- Rasoolimanesh, S. M. (2022). Discriminant validity assessment in PLS-SEM : A comprehensive composite-based approach. *Data Analysis Perspectives Journal*, 3(2), 1-8.
- Rather, R. A. (2019). Consequences of Consumer Engagement in Service Marketing: An Empirical Exploration. *Journal of Global Marketing*, 32(2), 116-135.
- Ric, T., & Benazić, D. (2022). From social interactivity to buying: An Instagram user behaviour based on the SOR paradigm. *Economic Research-Ekonomska Istraživanja*, 35(1), 5202-5220.
- Ridings, C. M., & Gefen, D. (2004). Virtual community attraction: Why people hang out online. *Journal of Computer-mediated communication*, 10(1), JCMC10110.
- Roemer, E., Schubert, F., & Henseler, J. (2021). HTMT2—an improved criterion for assessing discriminant validity in structural equation modeling. *Industrial Management and Data Systems*, 121(12), 2637-2650.
- Saleem, U., Yi, S., Bilal, M., Topor, D. I., & Căpușeanu, S. (2022). The impact of website quality on customer satisfaction and eWOM in online purchase intention: The moderating role of gender in risk-taking. *Frontiers in Psychology*, 13, 945707.
- Salkind, N. J. (Ed.). (2010). *Encyclopedia of research design* (Vol. 1). sage.
- Satici, S. A., Uysal, R., & Deniz, M. E. (2016). Linking social connectedness to loneliness: The mediating role of subjective happiness. *Personality and Individual Differences*, 97, 306-310.
- Seol, S., Lee, H., Yu, J., & Zo, H. (2016). Continuance usage of corporate SNS pages: A communicative ecology perspective. *Information and Management*, 53(6), 740-751.
- Shaikh, E., & Pratika, P. (2022). Exploring the Role of Social Connectedness and Health Anxiety in Predicting Psychological Well-being. *Asian Pacific Journal of Health Sciences*, 9(4), 112-116.
- Shaikh, E., & Pratika, P. (2022). Exploring the Role of Social Connectedness and Health Anxiety in Predicting Psychological Well-being. *Indian Journal of Health and Wellbeing*, 13(3), 325-329.
- Sharif, A., Soroya, S. H., Ahmad, S., & Mahmood, K. (2021). Antecedents of Self-Disclosure on Social Networking Sites (SNSs): A Study of Facebook Users. *Sustainability*, 13(3), 1-21.
- Sinclair, T. J., & Grieve, R. (2017). Facebook as a source of social connectedness in older adults. *Computers in Human Behavior*, 66, 363-369.
- Singh, P., Sharma, B. K., Arora, L., & Bhatt, V. (2023). Measuring social media impact on Impulse Buying Behavior. *Cogent Business & Management*, 10(3), 2262371.

- Song, Z., Liu, C., & Shi, R. (2022). How Do Fresh Live Broadcast Impact Consumers' Purchase Intention? Based on the SOR Theory. *Sustainability*, 14(21), 14382.
- Suhud, U., Allan, M., Sari, D. P., Hapsoro, B. B., & Prihandono, D. (2021). Customers' Continuance Intention in Using a Mobile Navigation App in the Tourism Context: What Factors Will Lead? *Academica Turistica*, 14(2), 137-148.
- Wang, N., Sun, Y., Zhan, L., & Shen, X. L. (2019). Social attachment, life satisfaction and SNS continuance: a dual-role perspective. *International Journal of Mobile Communications*, 17(5), 604-624.
- Teo, W. J. S., & Lee, C. S. (2016). Sharing brings happiness?: Effects of sharing in social media among adult users. In *Digital Libraries: Knowledge, Information, and Data in an Open Access Society: 18th International Conference on Asia-Pacific Digital Libraries, ICADL 2016, Tsukuba, Japan, December 7-9, 2016, Proceedings 18* (pp. 351-365). Springer International Publishing.
- Verplanken, B., & Aarts, H. (1999). Habit, Attitude, and Planned Behaviour: Is Habit an Empty Construct or an Interesting Case of Goal-directed Automaticity? *European Review of Social Psychology*, 10(1), 101-134.
- Wang, J. L., Jackson, L. A., Wang, H. Z., & Gaskin, J. (2015). Predicting Social Networking Site (SNS) use: Personality, attitudes, motivation and Internet self-efficacy. *Personality and Individual Differences*, 80, 119-124.
- Wu, P., & Feng, R. (2021). Social media and health: Emerging trends and future directions for research on young adults. *International Journal of Environmental Research and Public Health*, 18(15), 8141.
- Yang, J., Peng, M. Y. P., Wong, S. H., & Chong, W. (2021). How E-Learning Environmental Stimuli Influence Determinates of Learning Engagement in the Context of COVID-19? SOR Model Perspective. *Frontiers in Psychology*, 12, 584976.
- Yang, S., & Zeng, X. (2018). Sustainability of government social media: A multi-analytic approach to predict citizens' mobile government microblog continuance. *Sustainability*, 10(12), 4849.
- Yeşilyurt, F., & Solpuk Turhan, N. (2020). Prediction of the time spent on Instagram by social media addiction and life satisfaction. *Cypriot Journal of Educational Sciences*, 15(2), 208-219.
- Yin, J., Huang, Y., & Ma, Z. (2023). Explore the Feeling of Presence and Purchase Intention in Livestream Shopping: A Flow-Based Model. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(1), 237-256.
- Yu, R. P., McCammon, R. J., Ellison, N. B., & Langa, K. M. (2016). The relationships that matter: Social network site use and social wellbeing among older adults in the United States of America. *Ageing and Society*, 36(9), 1826-1852.
- Yu, Z., Klongthong, W., Thavorn, J., & Ngamkroekjoti, C. (2021). Understanding rural Chinese consumers' behavior: A stimulus-organism-response (S-O-R) perspective on Huawei's brand loyalty in China. *Cogent Business and Management*, 8(1), 1880679.
- Zhang, G., Yue, X., Ye, Y., & Peng, M. Y. P. (2021). Understanding the Impact of the Psychological Cognitive Process on Student Learning Satisfaction: Combination of the Social Cognitive Career Theory and SOR Model. *Frontiers in Psychology*, 12.
- Zhao, W. X., Shao, L., Zhan, M., & Peng, M. Y. P. (2022). How Do Determiners of Job Performance Matter During COVID-19? The Conservation of Resource Theory. *Frontiers in Psychology*, 12, 774552.
- Zheng, F. (2022). Fostering Students' Well-Being: The Mediating Role of Teacher Interpersonal Behavior and Student-Teacher Relationships. *Frontiers in Psychology*, 12.
- Zhou, J. (2018). Improving older people's life satisfaction via social networking site use: Evidence from China. *Australasian Journal on Ageing*, 37(1), E23-E28.