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THE RELATIONSHIP BETWEEN SOCIAL INFLUENCE AND ICT ADOPTION AMONG SENIOR CITIZENS

Mariah Azali (a), Dr. Norhaninah A. Gani* (b)
*Corresponding author

(a) Faculty of Business, Accounting and Social Science Universiti Poly-Tech Malaysia kl2111010053@student.kuptm.edu.my
(b) Faculty of Business, Accounting and Social Science Universiti Poly-Tech Malaysia norhaniah@kuptm.edu.my

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ABSTRACT
The use of information and communication technology (ICT) by senior citizens is becoming an increasingly important and complex societal issue. As the world's population ages, there is a greater need to comprehend the factors that influence older people's adoption of ICT and the implications for their quality of life, social connectedness, and overall well-being. This study delves into the various aspects of ICT adoption among senior citizens, such as the barriers, motivators, and impact on their lives. To obtain insights from an array of senior citizens, the study employs a quantitative method approach that includes questionnaires and administered by 158 people at Apartment Harmoni, Petaling Jaya. Understanding ICT adoption has benefited greatly from studies, especially when viewed through the Unified Theory of Acceptance and Use of Technology.

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1.0 INTRODUCTION

The adoption of Information and Communication Technology (ICT) among senior citizens is crucial in today's digital society. It not only enhances their quality of life but also promotes social connectedness, cognitive stimulation, and independence (Lissitsa & Chachashvili-Bolotin, 2015). Factors influencing ICT adoption among seniors include access to technology, digital literacy, affordability, and usability of devices, as well as social influence, family support, and community engagement

(Gupta et al., 2016). Understanding these factors is essential for designing effective interventions tailored to the unique needs of older individuals (Sabani et al., 2023).

ICT adoption among senior citizens plays a pivotal role in promoting active aging, social inclusion, and independence (Lissitsa & Chachashvili-Bolotin, 2015). By providing avenues for communication, learning, and access to services, ICT enhances the overall quality of life for seniors and addresses challenges like social isolation and limited mobility (Lissitsa & Chachashvili-Bolotin, 2015). Previous research has highlighted the importance of social support, perceived usefulness, ease of use, and access to resources in shaping older individuals' attitudes towards technology (Sabani et al., 2023). Social influence, family dynamics, and community networks also play significant roles in facilitating or hindering ICT adoption among seniors (Sabani et al., 2023).

The significance of ICT adoption among senior citizens lies in empowering older individuals, bridging generational and technological divides, and promoting digital inclusion (Lissitsa & Chachashvili-Bolotin, 2015). As technology advances rapidly, ensuring that seniors have access to and are proficient in using ICT is essential for their active participation in today's digital society (Lissitsa & Chachashvili-Bolotin, 2015). This shift towards digital engagement among seniors reflects broader societal trends towards inclusivity and recognizing the diverse needs of older populations (Lissitsa & Chachashvili-Bolotin, 2015).

In conclusion, the adoption of ICT among senior citizens is a critical aspect of promoting their well-being, independence, and social connectedness in an increasingly digital world. Understanding the factors influencing ICT adoption, such as social influence, access to technology, and usability, is essential for developing targeted interventions that cater to the unique needs of older individuals and enhance their digital inclusion.

3.0 LITERATURE REVIEW

3.1 Social Influence

To address the digital divide among older adults, it is crucial to go beyond mere internet access and ensure that they engage in new social practices facilitated by Information and Communication Technology (ICT) to enhance their social, physical, and mental well-being. Research by Chen & Schulz (2016) emphasizes the importance of older citizens experiencing the benefits of improved communication through ICT to combat social isolation. Cotten et al. (2012) highlight the role of social support from friends, family, and the community in aiding older adults in using ICT effectively. Selwyn et al. (2003) add that seniors, particularly females, are more likely to adopt ICT when encouraged by their social circle. Additionally, social engineering interventions may be necessary to prevent seniors from being excluded from technology-enabled environments, as noted by (Francis et al., 2018).

The significance of social influence on older adults' ICT use is underscored, with Arthanat et al. (2018) mentioning the impact of social influence on various scenarios, including social networking services and e-commerce. The study by Zhang et al. (2022) supports the idea that ICT interventions can reduce social isolation among the elderly. Furthermore, the research by Winstead et al. (2012) indicates that social support plays a crucial role in older adults' ICT use, emphasizing the need for tailored interventions to address their vulnerabilities to social influence.

In conclusion, addressing the digital divide among older adults requires a multifaceted approach that includes providing access to ICT, fostering social support networks, and implementing social engineering interventions. Encouragement from friends and family, along with tailored interventions, can help older adults overcome barriers to ICT adoption and enhance their overall well-being.

3.2 ICT Adoption Among Senior Citizens

Seniors are increasingly recognizing the importance of Information and Communication Technologies (ICT) due to the benefits they offer, such as access to social services, communication, and information (Jones et al., 2012). However, seniors often lack essential technology skills, which can be attributed to factors like limited exposure, socioeconomic status, level of education, and resource availability (Jones et al., 2012). The obstacles faced by seniors in adopting ICT include a lack of necessary equipment, internet connectivity, and skills, with access differing from younger generations (Jones et al., 2012). To address these challenges, cost-effective solutions and user-friendly interfaces are essential for seniors to fully benefit from ICT (Jones et al., 2012).

Various factors influence the adoption of ICT by the elderly, including perceived usefulness, ease of use, technology anxiety, enabling conditions, and social influence. Additionally, factors like low self-efficacy, computer literacy, accessibility issues, privacy concerns, and costs impact the use and acceptance of technology by older adults . Different educational backgrounds, socioeconomic circumstances, and health conditions also play a role in how challenging it is for older individuals to adopt ICT .

In conclusion, the adoption of ICT by seniors is crucial for enhancing their independence, quality of life, and reducing dependency on caregivers. Addressing the barriers to ICT adoption through tailored solutions and considering the various influencing factors can help seniors harness the benefits that technology offers in different aspects of their lives.

3.3 Theory of Acceptance and Use of Technology (TAM)

The understanding of ICT adoption has greatly benefited from studies by Venkatesh (2016), Wang (2023), and Thong (2016), especially when viewed through the perspective of the Unified Theory of Acceptance and Use of Technology (UTAUT) (Marikyan, 2023) Senior citizens face unique challenges as a result of the digital divide, making it necessary to fully comprehend the factors influencing their adoption of ICT (Wu, 2015). Technology Acceptance Model (TAM) and Theory of Reasoned Action (TRA) are two examples of the technology acceptance theories that are combined in the UTAUT model, which was first proposed by Venkatesh et al. (2003). (TRA), to develop an integrated and all-encompassing theoretical framework. The fundamental ideas of UTAUT include Social Influence (SI), Performance Expectancy (PE), Effort Expectancy (EE), and Facilitating Conditions (FC), each of which is crucial in determining how someone intends to proceed to use ICT. A key concept is Performance Expectancy (PE), which expresses a user's perception of how using ICT will improve their performance (Venkatesh et al., 2003). It is based on concepts including relative advantage, job fit, perceived utility, extrinsic motivation, and outcome expectations. Performance Expectancy is a significant predictor of use intention in both voluntary and mandatory ICT adoption settings, according to research by Wang (2023) and Thong (2016). Next, the perceived ease of using the system is known as Effort Expectancy (EE), as defined by Venkatesh et al. (2003). According to Venkatesh et al. (2003), Social Influence (SI) is "the degree to which an individual perceives how significantly others believe he or she ought to employ the new system." In addition, Facilitating Conditions (FC), which is characterised as "the extent to which a person maintains that an organization's and technical framework is in place to facilitate system use (Venkatesh et al., 2003), directly and favourably impact the intention to use.

4.0 RESEARCH FRAMEWORK

To determine the relationship between social influence and behavioral intention at Apartment Harmoni, Petaling Jaya, Selangor, Malaysia, is depicted in Figure 1.

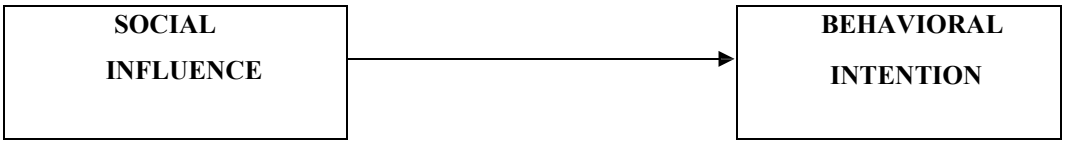

Figure 1: This conceptual framework has been adopted from Hayrol Azril et al. (2010)

5.0 METHODOLOGY

Research Design	The quantitative method was used in this study to investigate ICT Adoption Among Senior Citizens in Local Communities. Quantitative research involves acquiring broad insights from large amounts of data through the use of a logical and data-driven approach to measuring people's perspectives statistically and numerically.
Target Population	Residents at Apartment Harmoni, Petaling Jaya, Malaysia
Sample Size	A total of 158 respondents anticipated in the survey,
Data Collection	The questionnaire was administered online by Google Form and shared by the link only through the community's leader on Whatsapp as he will be the main distributor to receive a large number of samples.
Instrument/ Questionnaire	The instrument consists of (2) Sections: Part A: Demographic questions (9 Items); Part E: Social Influence (3 Items)

Data Analysis	Constructed around a logical explanatory model that was developed using empirical data and secondary data sources related to SPSS and data analysis. The SPSS programme assists psychologist specialists in analysing psychological data on the basis of accuracy with the concretization of empirical results in mathematical-statistical analysis and correlation connections. The primary data source focuses on the communities at Apartment Harmoni, Petaling Jaya, Malaysia that have previously used SPSS for various social-science related research projects.
Reliability Analysis	Reliability test including Cronbach's alpha is a coefficient tool to measure the internal concept consistency of Likert scale question, examining the reliability of all the statements in scaled questions (Goforth, 2015). The data result was presented in table 1 until table 6, which was the reliability of 4 and 3 Likert scale questions.

Reliability Statistics

Cronbach's Alpha	N of Items
.316	3

Figure: Social Influence

The Cronbach's Alpha coefficient of 3 Likert scale questions was .316, suggesting that the 3 items have relatively "Unacceptable" internal consistency. In other words, the 4 questions were of Social Influence. According to the result, the samples had an unacceptable reliability. A Cronbach's alpha of .316 for social influence is considered low and indicates a lack of internal consistency. Social influence is a multifaceted concept with many dimensions, including family influence, peer influence, and community support. The difficulties in collecting data from senior citizens, particularly those with limited exposure to technology, may contribute to variability in responses, affecting the scale's reliability.

6.0 FINDINGS AND DISCUSSION

The results of the regression analysis, the responses to the study's research question and hypothesis, and the demographic data of the respondents are all presented in this section.

6.1 Demographic Data

Table 6.1: Demographic Analysis

Demographic	Categories	Frequency	Percentage (%)
Gender	Male	107	67.7
	Female	51	32.3
Age	Less than 20 years old	3	1.9
	20-30 years old	32	20.3
	30-40 years old	52	32.9
	40-50 years old	58	36.7
	Above 50 years old	13	8.2
Occupation	Government	34	21.5
	Non-profit sector	2	1.3
	Student	13	8.2
	Private	76	48.1
	Others	33	20.9

Education	PHD degree	2	1.3
	Master degree	17	10.8
	Bachelor degree	54	34.2
	Diploma	34	21.5
	SPM	41	25.9
	Others	10	6.3
Race	Malay	156	98.7
	Chinese	0	0
	India	2	1.83
	Others	0	0
Use of ICT	Yes	149	94.3
	No	9	5.7
Use of ICT Devices	Smart phone	152	96.2
	Internet	119	75.3
	Personal computer	84	53.2
	Tablet computer	53	33.5
Use of Social Media	No account	1	0.6
	Whatsapp	148	93.7
	Facebook	115	72.8
	Instagram	107	67.7
	Twitter (X)	59	37.3
	LinkedIn	36	22.8

Purpose Use of Senior Citizen	Meeting new people	53	33.5
	Arranging hospital appointments	76	48.1
	Listening music	47	29.7
	Watching video, film, TV series	81	51.3
	Shopping	78	49.4
	Playing game	32	20.3
	Using e-government services	83	52.5
	Sending e-mail	79	50
	Using banking services	105	66.5
	Learning new information	83	52.5
	Using social media accounts	86	54.4
	Following news and latest developments	121	76.6
	Contacting with family and friends	127	80.4

6.2 Independent Variable – Social Influence

No	Measurement Item	1	2	3	4	5	Mean Standard deviation
1.	People who influence my behaviour think that I should use ICT	1 0.6%	17 10.8%	62 39.2%	56 35.4%	22 13.9%	3.5190 0.88671
2.	People who are important to me think that I should use ICT	1 0.6%	10 6.3%	49 31%	73 46.2%	25 15.8%	3.7152 0.80675
3.	The people whose opinions that I value think that I should ICT	1 0.6%	9 5.7%	58 36.7%	65 41.1%	25 15.8%	3.9873 4.08974

Table 3: Descriptive Statistics of Social Influence towards The Use of ICT

Shows the independent variable, which is the social influence towards the use of ICT among senior citizens, and the result of mean and standard deviation analysis. Item 3 had the highest mean, 3.9873, and the standard deviation was 4.08974. The respondent agreed that the people whose opinions that they value think they should use ICT. Item 1 has the lowest mean of 3.5190 and the lowest standard deviation of 0.88671.

7.3 Hypothesis Analysis

Hypothesis analysis was used to determine the relationship between social influence and ICT adoption among senior citizens as follows:

Table 4: Relationship between Social Influence and Behavioural Intention towards the use of ICT

		Social Influence	Behavioural Intention
Social Influence	**Pearson Correlation**	**1**	**.256****
Behavioural Intention	**Pearson Correlation**	**.256****	**1**

****. Correlation is significant at the 0.01 level (2-tailed).**

The result shows that there was a negligible correlation and there is no substantial linear relationship between social influence and ICT adoption among senior citizens. The impact of other people's opinions, attitudes, and behaviors on an individual's decisions is referred to as social influence, and it is frequently identified as a powerful factor in technology adoption. This influence can come from a variety of sources, including family, friends, healthcare providers, and societal trends (Niosi, Social Influences, 2019) The result indicates that senior citizens need support and encouragement. When senior citizens obtain encouragement and support from their family and friends to adopt ICT, they are more inclined to conquer their fears and take the plunge. This assistance may include assistance with device setup, training, and problem resolution. Moreover, peer pressure plays a crucial role in the relationship as senior citizens may be driven to adhere to the behavior of their peers in a society where ICT usage is the norm. When they see others their age proficiently employing technology, they are more likely to do the same (Hänninen, 2020) Through this, policymakers, healthcare providers, and community organizations can create programmes to improve ICT literacy among the elderly. They can speed up the adoption process by proactively engaging social networks (Xie, 2018) Furthermore, community initiatives focused on increasing senior citizens' access to ICT may encourage a sense of belonging and solidarity, making seniors more comfortable with technology. These programmes frequently provide an opportunity for people to share their success stories and experiences (HeeKyung Chang, 2023)

8.0 CONCLUSION

To put it simply, the role of Information and Communication Technology (ICT) in the lives of senior citizens is undeniably significant, providing a variety of benefits that improve their overall quality of life. ICT promotes socialisation, cognitive stimulation, safety and independence, and access to mental health resources. precisely the elderly population grows, particularly in countries such as Malaysia, ICT adoption becomes increasingly important in meeting the needs of this demographic.

However, several challenges and barriers must be focused on to ensure widespread and effective ICT adoption among senior citizens. Access, affordability, digital literacy, and the usability of devices and interfaces are among the challenges. The digital divide continues to be an issue, and closing it is critical to ensuring that senior citizens are able to enjoy the benefits of technology.

Social influence, particularly from family and friends, is critical in motivating senior citizens to embrace ICT. It has the potential to influence their readiness to adopt technology. As a result, social engineering interventions and support networks

should be developed to encourage and assist seniors in effectively using ICT. Furthermore, it is critical to recognise that the perspectives and desires of older adults may differ from those of their family members. Balancing autonomy and independence with the potential benefits of technology can be a difficult decision. In the evolving digital era, societies and policymakers must continue to prioritize ensuring ICT accessible, user-friendly, and affordable for senior citizens. We may encourage the elderly to fully engage with technology by doing so, as well as promoting social support and acceptance, thus contributing to their well-being and active ageing in a connected world.

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