



East African Journal of Information Technology

eajit.eanso.org

Volume 7, Issue 1, 2024

Print ISSN: 2707-5346 | Online ISSN: 2707-5354

Title DOI: <https://doi.org/10.37284/2707-5354>



EAST AFRICAN
NATURE &
SCIENCE
ORGANIZATION

Original Article

Determinants of Mobile Phone Usage Among Young Adults in Zanzibar

Haji Ali Haji, PhD¹*

¹ The State University of Zanzibar, P. O. Box 146, Tanzania.

* ORCID: <https://orcid.org/0000-0002-0295-4540>; Email: hajiali10@hotmail.com

Article DOI: <https://doi.org/10.37284/eajit.7.1.2368>

Date Published: **ABSTRACT**

04 November 2024

Keywords:

Mobile Phone,
Young Adults,
Mobile Internet,
Livelihood.

Mobile phones have become a ubiquitous communication tool, particularly among young adults. What was once a simple technological device has now transformed into a social tool, deeply embedded in the daily lives of these individuals. This paper explores mobile phone usage among young adults in Zanzibar from behavioral, economic, and psychological perspectives. Data was collected from 375 participants, consisting of Zanzibar youth aged 16 to 40, residing in both rural and urban areas, through semi-structured interviews. The findings indicate that young adults utilize mobile phones for various purposes, including communication with family and friends, browsing the internet, consuming media, and playing games. The study also delved into the extent of mobile phone dependency, as well as the positive and negative attitudes surrounding its use. It was found that many young adults spend excessive time and money on mobile phones, sometimes prioritizing airtime and data bundles over basic necessities. The paper concludes with recommendations aimed at fostering balanced mobile phone usage among the younger generation.

APA CITATION

Haji, H. A. (2024). Determinants of Mobile Phone Usage Among Young Adults in Zanzibar. *East African Journal of Information Technology*, 7(1), 400-411. <https://doi.org/10.37284/eajit.7.1.2368>

CHICAGO CITATION

Haji, Haji Ali. 2024. "Determinants of Mobile Phone Usage Among Young Adults in Zanzibar". *East African Journal of Information Technology* 7 (1), 400-411. <https://doi.org/10.37284/eajit.7.1.2368>.

HARVARD CITATION

Haji, H. A. (2024) "Determinants of Mobile Phone Usage Among Young Adults in Zanzibar", *East African Journal of Information Technology*, 7(1), pp. 400-411. doi: 10.37284/eajit.7.1.2368.

IEEE CITATION

H. A., Haji "Determinants of Mobile Phone Usage Among Young Adults in Zanzibar.", *EAJIT*, vol. 7, no. 1, pp. 400-411, Oct. 2024.

MLA CITATION

Haji, Haji Ali "Determinants of Mobile Phone Usage Among Young Adults in Zanzibar". *East African Journal of Information Technology*, Vol. 7, no. 1, Oct. 2024, pp. 400-411, doi:10.37284/eajit.7.1.2368.

INTRODUCTION

The widespread adoption of mobile phones has transformed global communication, reshaping how people connect, access information, and

conduct business. A mobile phone is a portable device that allows long-distance communication without the need for physical wires. Over the years, mobile phones have permeated virtually all

aspects of life, particularly in developing regions like Africa, where they have been pivotal in closing the digital divide, empowering communities, and driving economic growth. According to Adarkwah and Huang (2023), mobile phones have become so ingrained in daily life that they are now found even in the most remote corners of the globe.

The evolution of mobile phones began in the 1980s with the introduction of analog mobile networks. Over time, technological advancements have led to the development of digital networks, more compact devices, and smartphones with advanced computing capabilities. The advent of 3G, 4G, and now 5G networks has further enhanced mobile functionality, providing faster data speeds, multimedia capabilities, and on-the-go internet access. The recent development, 5G technology, featuring IPv6 or IPv6.5G, aims to deliver unlimited data access and seamless information sharing across the globe (Gawas, 2015).

According to the International Telecommunication Union (ITU), over 5.2 billion people globally now use mobile phones. This significant figure highlights the critical role mobile technology plays in modern society. In Africa, mobile phone penetration has witnessed remarkable growth. As of 2023, the continent surpassed one billion mobile subscriptions, with mobile penetration exceeding 80% in several countries, making Africa the fastest-growing mobile market (GSMA, 2023). This growth is driven by affordable handsets, expanded network coverage, and localized mobile services.

Mobile phones have democratized communication, allowing people to stay connected across vast distances. Text messaging, voice calls, and social media platforms have become integral tools for communication and information sharing. Additionally, mobile phones are crucial for economic empowerment in Africa, providing access to financial services, market information, and job opportunities. Platforms like M-Pesa have revolutionized financial inclusion,

enabling millions to access basic financial services (Blavatnik, 2017).

Mobile technology also enhances healthcare delivery in remote areas, offering solutions such as mobile health (mHealth) services for patient monitoring, health education, and information access. Education has similarly benefited from mobile technology, with mobile-based platforms helping bridge the gap in access to quality education, especially in rural areas (Pinchot, Paullet, & Rota, 2011). Overall, mobile phones have facilitated faster, easier, and more affordable information exchange, breaking down geographical barriers.

Usage of Mobile Phones in Zanzibar

Zanzibar, a semi-autonomous region of Tanzania, is one of the many developing areas experiencing rapid growth in mobile phone usage. Zanzibar consists of two main islands, Unguja and Pemba, along with several smaller islands. The country has an area of 2,654 square kilometers. According to the 2022 sensor of Tanzania, Zanzibar has a population of 1,889,77 (NBS, 2022).

The region has seen a surge in mobile phone adoption across all demographics, including age, gender, and socioeconomic status. According to the FinScope survey (2017), 73% of Zanzibar adults own mobile phones. By the end of 2023, Tanzania's mobile subscriptions reached over 49 million, with a penetration rate of more than 80%. Mobile phones in Zanzibar are used for communication, bill payments, access to news, and more, supported by six major mobile providers, including Zantel, Tigo, Airtel and Vodacom. The Zantel is the first mobile company operated in Zanzibar since 1993, with more than 800,000 subscribers out of 1.8 million people living in Zanzibar (Zantel, 2024).

Furthermore, the economy of Zanzibar, heavily reliant on tourism, has also adapted to the digital age, with mobile phones facilitating business transactions and communication between tour operators and clients. Mobile money services are widely used in Zanzibar for payments, savings, and remittances, contributing to financial

inclusion, especially for those without access to traditional banking services. Mobile health initiatives have also been launched to improve healthcare delivery in remote parts of the islands. These services help in patient monitoring, health education, and access to vital health information, addressing some of the limitations in Zanzibar's healthcare infrastructure. The use of mobile phones in the education sector has also dramatically increased in Zanzibar, enabling students and teachers to access a wide range of educational materials online, such as e-books, tutorials, and research articles (Haji, Shaame, & Kombo, 2013). While challenges remain, especially in terms of network coverage particularly in rural areas, the trend of increasing mobile phone usage is expected to continue, fostering further economic and social development.

Behavioral, Economic, and Psychological Impact of Mobile Phone Use Among Young Adults

Young adults' familiarity with mobile technology significantly influences their usage patterns, with higher technological literacy correlating with more extensive use of mobile phones for information access, social networking, and mobile applications. Mobile phones impact young people's behavior by shaping their social interactions and communication styles. However, overuse can lead to addictive behavior, characterized by excessive and involuntary use (Babadi-Akashe et al., 2014; Francke, 2007).

Economically, mobile phones have transitioned from business tools to personal devices, with many young adults spending large amounts of money on airtime and data bundles, often at the expense of essential needs (Hassan & Semkwiji, 2011). This spending can strain personal finances and contribute to financial stress.

Psychologically, excessive mobile phone use has been linked to stress, fatigue, and even psychological disorders. Young adults with lower mental health are particularly vulnerable to mobile phone addiction, using communication as a means to alleviate internal tensions (Liu, Yang,

& Nie, 2023). Conversely, those with higher mental health also experience some degree of mobile phone addiction, whether habitual or psychological.

This study seeks to explore the behavioral, economic, and psychological effects of mobile phone usage among young adults in Zanzibar. The paper is structured as follows: Section 2 covers the study's methodology, Section 3 presents the results, Section 4 discusses the findings, and Section 5 offers conclusions and recommendations.

THEORETICAL REVIEW

Gratifications Theory

This study applied the Uses and Gratifications Theory (UGT) to examine mobile phone usage among young adults. The theory developed in the early 1940s and further refined by Katz and Blumler (1974), UGT explores why people use certain types of media, what needs drive their usage, and the gratifications they derive from it. The theory is grounded in two primary assumptions: first, users are active participants who select the media content that best meets their needs; second, media users are generally aware of why they choose to engage with particular media.

With the advent of digital technologies, UGT has gained new relevance. The rise of the internet, social media, and mobile phones has dramatically expanded the range of media available to users, allowing them to seek out content that fulfills specific needs. For instance, users turn to platforms like YouTube for educational content, Facebook and WhatsApp for social interaction, and Netflix and TikTok for entertainment.

In today's social media-driven world, UGT remains a crucial theoretical framework (Ruggiero, 2000). It highlights the active role that individuals play in selecting and using media to meet diverse personal and social needs. The theory has evolved to fit the digital age, providing valuable insights into how users engage with various media platforms. In the case of this study, young adults use their mobile phones to fulfill a

variety of needs, ranging from social interaction to self-expression and information access.

The UGT provides a comprehensive framework for understanding the determinants of mobile phone usage among young adults in Zanzibar. Whether for social interaction, information access, entertainment, self-expression, or even economic transactions, mobile phones have become indispensable in the lives of young Zanzibaris. UGT underscores the active role that users play in seeking out these devices to meet their diverse needs, emphasizing the critical importance of mobile technology in contemporary Zanzibari society.

MATERIALS AND METHODS

Methods

This study employed a qualitative research approach based on a survey. In-depth, semi-structured interviews were conducted with both individuals and groups. The research took place in both rural (North 'A' and Central Districts) and urban (Urban, West 'A' and West 'B' Districts) areas of Zanzibar, from August to December 2023. Semi-structured interviews are the most appropriate technique when the researcher has substantial knowledge of the subject matter. This approach allows for flexibility in conversations, which can adapt and evolve depending on the participants. Moreover, it facilitates a thorough and accurate exchange of ideas between the interviewer and the interviewees (Tan, 2022).

Participants

A total of 375 respondents were randomly selected for this study. The group comprised 236 males and 139 females, all between the ages of 16 and 40.

Data Collection

Data was collected using semi-structured interviews. The interview questions, prepared in advance, were divided into four sections. The first section collected demographic information, the second focused on mobile phone ownership, the third addressed the use of mobile phone services, and the final section explored the positive and negative impacts of mobile phone usage among young adults in Zanzibar. Data collection tools included text notes and voice recordings. Before each interview, participants were informed about the study's purpose and asked to provide consent by signing a form, ensuring the validity of the collected data.

Data Analysis

At the conclusion of the interviews, researchers transcribed the data gathered from both text notes and voice recordings. During transcription, key concepts that recurred throughout the interviews were noted. These recurring themes helped in identifying common patterns in the data. Once transcription was completed, the responses were analyzed to identify consistent concepts related to mobile phone usage among young adults in Zanzibar. Microsoft Excel was also used to present the data in table and chart formats.

RESULTS OF THE STUDY

Demographic Information of Participants

The demographic data revealed that 63% of the participants were male, while 37% were female. Most participants (61%) resided in urban areas, while the remaining 39% were from rural areas. The majority of respondents (56%) were single, and 46% were students. *Table 1* illustrates the demographic breakdown.

Table 1. Demographic information of participants

Item	Frequency N (%)
Gender	
Male	236 (63%)
Female	139 (37%)
Age group	
16-23	184 (49%)

Item	Frequency N (%)
24-31	94 (25%)
32-40	97 (26%)
Residence status	
Urban	229 (61%)
Rural	146 (39%)
Marital status	
Single	201 (54%)
Married	137 (36%)
Divorce	26 (07%)
Widower	11 (03%)
Occupation	
Student	173 (46%)
Employed	60 (16%)
Self-employed	43 (11%)
Farmer	26 (07%)
Business	22 (06%)
Fisherman	29 (08%)
Other jobs	22 (06%)

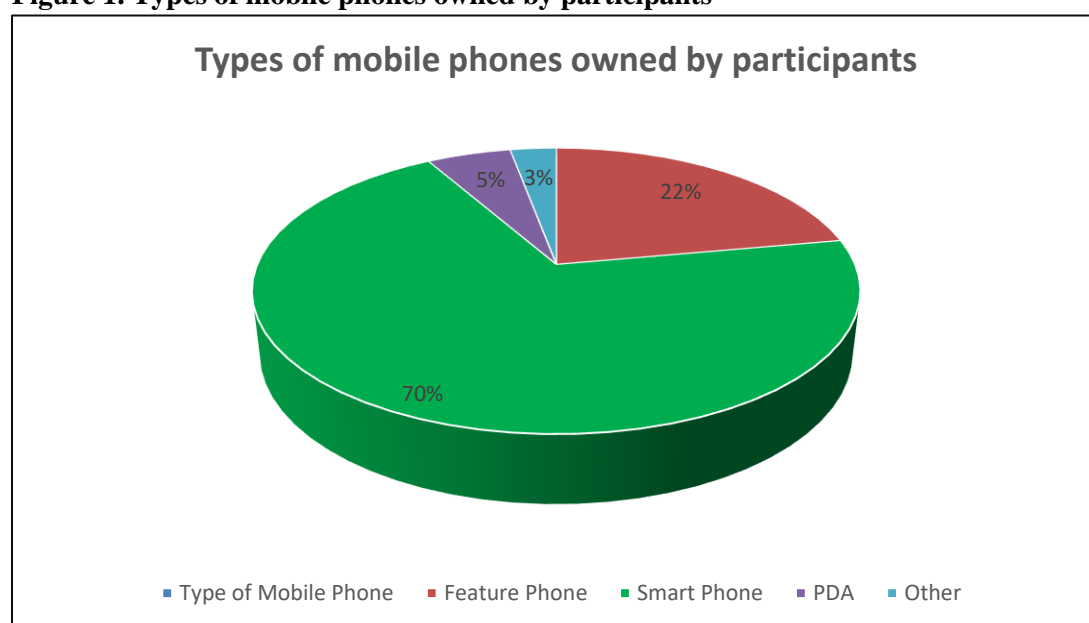
Ownership of Mobile Phones

All participants owned mobile phones. *Figure 1* shows that 70% of participants owned smartphones, followed by feature phones (22%), PDAs (5%), and other devices such as tablets and iPods (3%). Additionally, 81% of the mobile phones owned supported internet access. Some participants owned multiple phones, often using them for different purposes. The data also revealed that many participants used mobile

phones that supported more than one SIM card, allowing them to use different mobile networks.

Participants favored five primary mobile service providers in Zanzibar. The most popular was Zantel (51%), followed by Tigo (21%), Vodacom (12%), Halotel (9%), and Airtel (7%). Many participants either used Zantel exclusively or in combination with another network, often utilizing phones with dual-SIM capabilities.

Figure 1. Types of mobile phones owned by participants



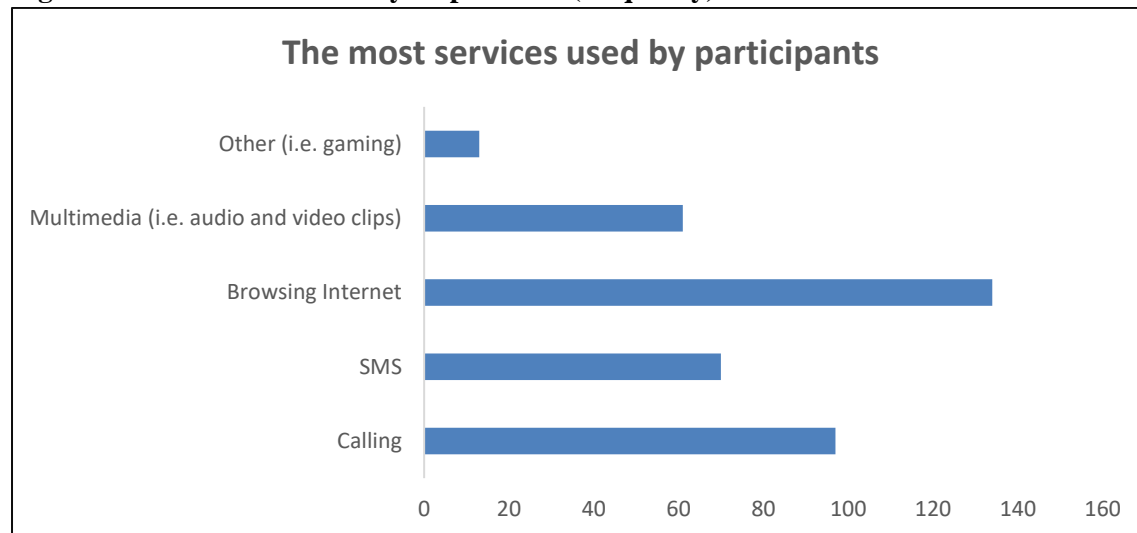
Usage of Mobile Phones

Participants were asked about the two services they used most frequently. The majority reported using mobile phones for browsing the internet, followed by making phone calls, sending SMS messages, using multimedia services (e.g., listening to audio, watching videos), and, less

frequently, playing games. *Figure 2* illustrates the frequency of these activities.

Those without internet access primarily used their phones for basic functions such as making calls, sending/reading SMS, using the torchlight, and listening to the radio. These individuals were mostly from rural areas where electricity is often scarce.

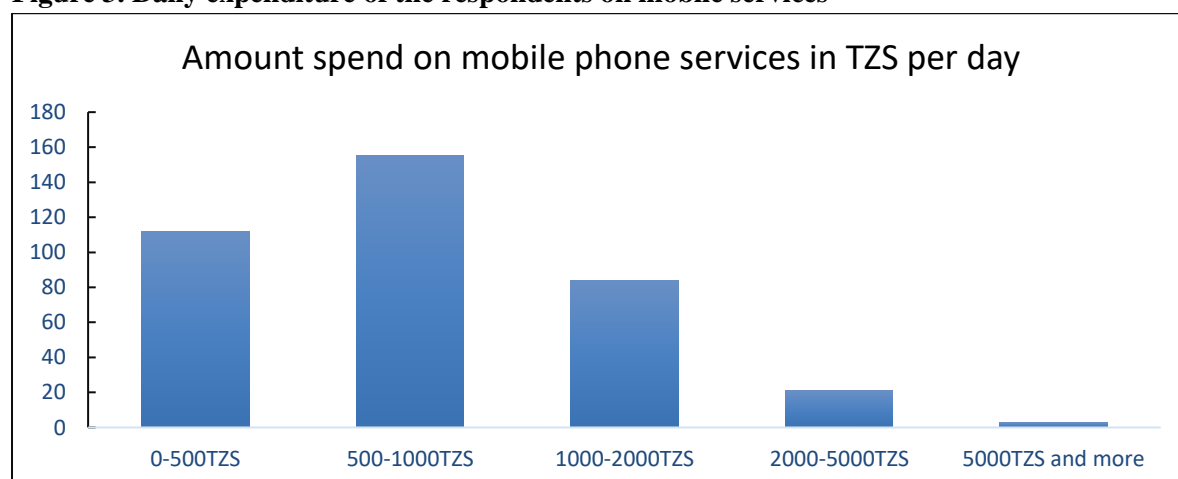
Figure 2. Services most used by respondents (frequency).



Participants were also asked about their daily expenditure on mobile services. *Figure 3* reveals that most participants spent between 500-1000 TZS per day, followed by those who spent less

than 500 TZS, between 1000-2000 TZS, and between 2000-5000 TZS. A small number of participants spent over 5000 TZS daily.

Figure 3. Daily expenditure of the respondents on mobile services



Utilization of the Internet

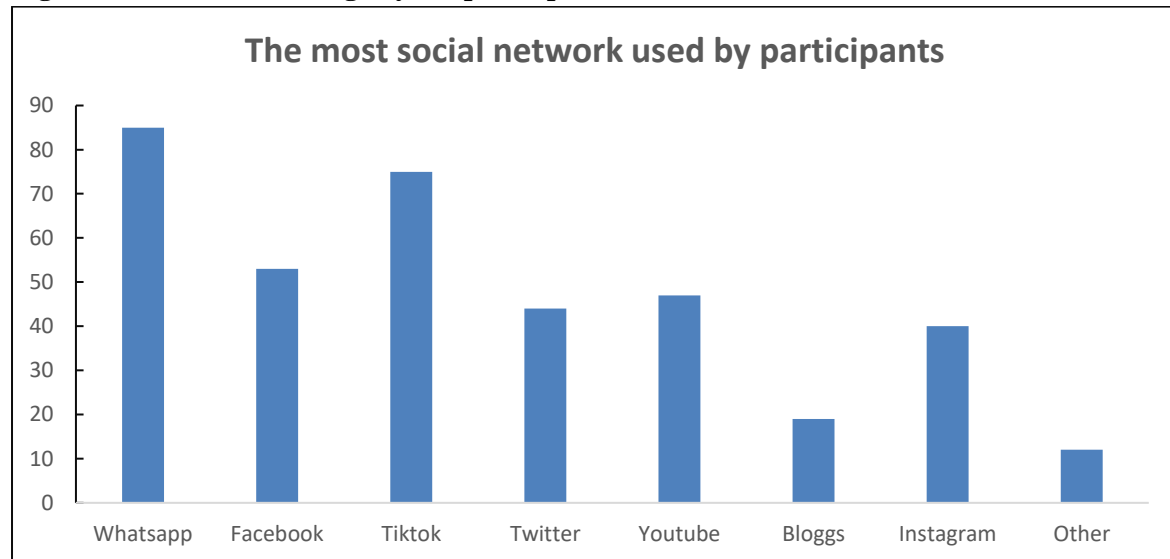
All participants with internet-enabled phones accessed the internet for various activities, such as

browsing entertainment content (28%), reading or downloading educational materials (22%), reading the news (21%), sending and receiving emails (12%), and viewing pornographic content

(11%). *Figure 4* shows that 76% of participants used social media platforms, with WhatsApp being the most preferred application, followed by

TikTok, Facebook, YouTube, Twitter (X), Instagram, and blogs. Other social networks such as Snapchat, Pinterest and LinkedIn.

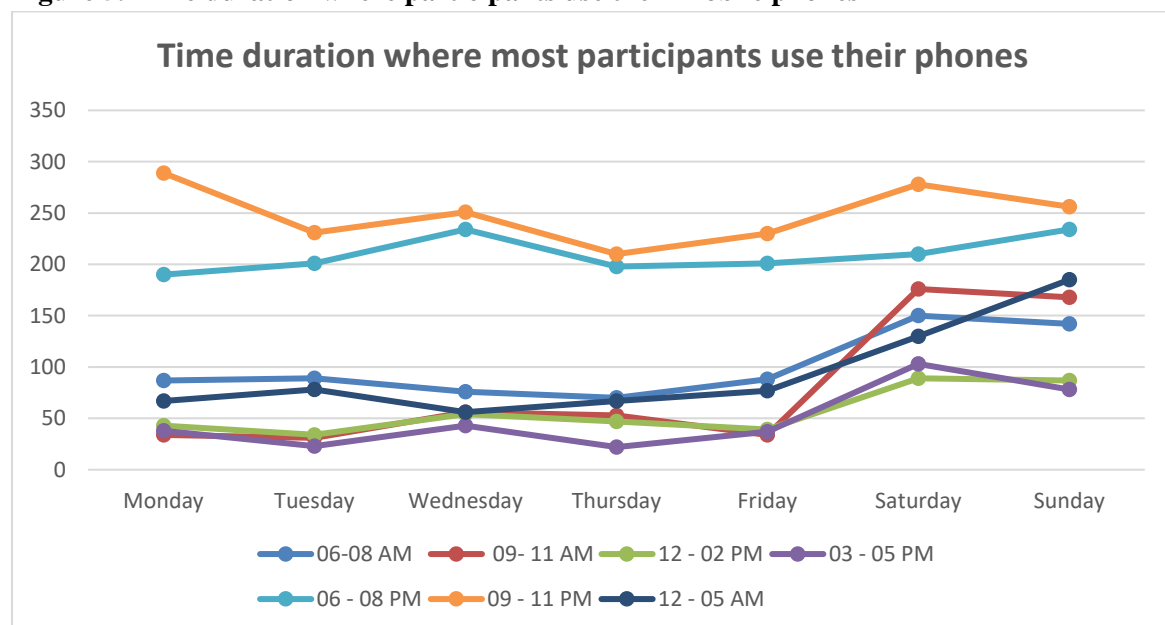
Figure 4. Social Media usage by the participants



When asked about their internet usage habits, 40% of participants reported frequent internet browsing, 22% browsed mostly, 35% sometimes, and 3% rarely. Most participants spent more than one hour online daily, with some spending more than five hours. Mobile data was the primary method of internet connection for 84% of respondents, while 16% used Wi-Fi. When asked

about connection speed, 36% reported average speeds, 42% said the connection was slow, and 22% said it was fast. *Figure 5* shows that the majority of internet usage occurred between 9-11 PM, followed by 12-5 AM. Weekends, particularly in the mornings and evenings, saw the highest internet activity.

Figure 5. Time duration where participants use their mobile phones



The Impact of Mobile Phone Usage among Zanzibar Youth

When asked about the overall impact of mobile phones, 49% of participants believed mobile phones had both positive and negative impacts, 25% cited only positive effects, and 26% mentioned only negative impacts.

Some participants argued that mobile phones had a positive influence, especially for staying in touch with family and accessing news and religious content. Others felt that mobile phones had a negative impact, particularly in fostering unproductive behaviors such as pornography and excessive gaming. Many respondents indicated that the effects depended on the individual's usage, balancing both the benefits (e.g., educational resources, communication) and drawbacks (e.g., distraction, misuse for inappropriate content).

Here are some responses from participants: -

This respondent mentioned that the use of mobile phones has only a positive impact on young adults. Stated that:

"It has now been over a decade since I began using mobile phones, and I am still excited about owning one. For me, mobile phones have had a positive impact on young people. Many young people, including myself, use mobile phones for positive activities such as staying in touch with family and friends, keeping up with the latest news, and downloading music and religious clips."

This respondent mentioned that the use of mobile phones has only a negative impact on young adults. Stated that:

"In my opinion, mobile phones have only a negative impact on young people. Many of them are not working or earning money; instead, they spend their time on mobile phones, searching for pornographic pictures and videos, looking for attractive women, and playing games. Honestly, mobile phones are too expensive and not worth it."

The study also revealed that some respondents believe the use of mobile phones has both positive and negative impacts on young adults, depending on how the individuals use them. For example, one respondent stated that:

"I believe mobile phones have both positive and negative impacts on young people, depending on how they are used. If they are used for educational purposes, such as finding study materials, reading news, or listening to the Qur'an and Hadith [Islamic teachings], they can be beneficial. However, if they are used for unnecessary calls, spreading harmful information, or watching adult content, they can have a negative impact on both young people and society."

And another one reported that:

"For me, mobile phones have both positive and negative impacts. On the positive side, we use phones for communication, watching news, and following sports. However, on the negative side, some young adults misuse their mobile phones to find beautiful women and engage in fraudulent activities that lead to sexual harassment."

DISCUSSION

General Discussion

This study sought to examine how young adults in Zanzibar use mobile phones from a behavioral, economic, and psychological perspective. The findings revealed that the adoption of mobile phones by young adults is a global trend. Mobile phones have become an integral part of adolescents' lives, serving as the most popular form of electronic communication for many. Beyond communication, mobile phones are also used to share personal information, with participants indicating a strong attachment to their devices, seeing them as essential parts of their lives. Mobile phone applications have evolved significantly in recent years, enabling people to connect and function in a globally networked world where young individuals work, socialize, organize, and entertain themselves (ITU, 2023).

The study showed that young adults use mobile phones for various activities, including making calls, sending messages, gaming, watching videos, and accessing the Internet. Specifically, 81% of participants used mobile phones for Internet access, driven by a need for personalized services such as web browsing, email, social networking, and GPS functionalities (Alotaibi et al., 2022; Vaterlaus et al., 2021). Most respondents preferred using their phones for Internet browsing and calls. When online, they engaged in diverse activities like reading and downloading materials, reading news, sending emails, and, in some cases, dating or accessing adult content.

The findings also highlighted that young adults, especially students, use mobile phones for educational purposes. Many reported using mobile phones to access study materials, participate in online discussions, and seek additional resources when they struggled to understand classroom lessons. However, the study found that some students were distracted by their mobile phones, engaging in unproductive activities even during class sessions.

Mobile phones are also used for reading news, job applications, and seeking information on health, education, and travel. Some, particularly women, use their phones for cooking and home decoration tips. This shows the growing importance of mobile technology, especially smartphones, in Zanzibar, with people increasingly shifting from personal computers to mobile devices (Vaterlaus et al., 2021).

In fact, the use of mobile phone technology particularly, the smartphone is increasing rapidly in Zanzibar. People are leaving personal computers and moving towards smartphones. Up to date, still personal computers dominate the market, but smartphones and tablets will see more considerable growth in the future (Vaterlaus et al., 2021). The findings of this study have coincided with those reported by Walsh et al., (2011) in a study conducted in Australia which found that young Australians use their mobile phone to communicate with others by phone calls, text

messages, taking pictures, gaming, browsing and downloading pictures, clips and reading materials.

Interestingly, most youth in Zanzibar spend more on mobile phone services than on basic needs. More than half of the respondents spend 500–2000 TZS daily (about 1 USD) on mobile services, with the highest expenditures observed in the 24–31 age group. This is disturbing given that Zanzibar is part of Tanzania, where two-thirds of the population live below the poverty line of 1.25 USD per day (DANIDA, 2018). Based on the UGT, the media platforms must be readily available and accessible to meet users' needs. As the price of mobile phones and mobile data continues to fall, even in rural areas of Zanzibar, mobile technology has become essential for communication, education, and business activities. The financial burden is particularly severe for those without regular income, such as women and students.

The study further found that women are more likely to use mobile phones for social reasons, while men use them more for calling. This contrasts with findings from Bianchi and Philips (2005), as this study observed that both men and women use mobile phones for communication and social purposes. Young adults frequently use their phones for communication, entertainment, and gaming, with some spending over five hours per day online. Mobile phone addiction is evident, as many participants reported being unable to go even 10 minutes without using their devices.

Despite its benefits, mobile phone use has negative economic and social impacts. The study indicated that mobile phones can strain household resources, diverting funds from essential needs like food, health, and education. Furthermore, concerns about access to inappropriate content, such as pornography, and the imitation of celebrity lifestyles were raised. Participants also mentioned that mobile phones contributed to social issues like relationship breakdowns, harassment, and crime. Nevertheless, mobile phones have also enhanced livelihoods by improving communication, reducing travel costs, and fostering social connections. Some

participants believed mobile phones increased household income through business activities, such as selling airtime or operating mobile money services.

The Effects of Mobile Phone Use on Young Adults' Behavior, Economics, and Psychology

Understanding the factors influencing mobile phone use among young adults in Zanzibar requires a multidimensional approach. Behavioral, economic, and psychological factors play a role in shaping how mobile phones are used (Kim, Shin, & Kim, 2011). Behavioral issues include anxiety around mobile communication, overuse in inappropriate situations, and increased time spent on mobile devices, which can harm relationships.

The study showed that many young adults have become addicted to mobile phones, with some unable to resist checking their phones every few minutes. Mobile phone addiction, as noted by Kin et al. (2014), can be considered a form of technological addiction, involving non-chemical behavioral dependencies (Kim, Shin, & Kim, 2011). Participants in this study reflected this addiction, frequently reporting stress and anxiety due to their mobile phone use.

Hooper and Zhou (2007), psychologists from Staffordshire University, studied 106 people who had used mobile phones and found that 16% of them had behavioral problems. Their research concluded that behavioral problems followed by the addiction to cell phone use cause stress. Despite the importance of mobile phones in everyday life, research indicated that some people use mobile phones uncontrollably and this has affected their personal lives.

Economically, the study found that young adults spent a significant amount of money on mobile phone services, sometimes at the expense of basic needs. The competitive mobile network market, where each network offers different services, has driven many to own multiple SIM cards, adding to the financial burden. Intensely, excessive phone use has been linked to social isolation, anxiety, and sleep disorders (O'Keeffe & Clarke-Pearson,

2011). Mobile phone addiction is thus a significant concern, particularly among young people.

In the matter of psychology, mobile phone technology reduces social relations and the welfare of the individual due to isolation and depression. Using too much time on mobile phones can lead to social anxiety and sleep disorders (O'Keeffe & Clarke-Pearson, 2011; de Oliveira et al., 2011). From these contents, it can be concluded that there is a relationship between addiction to mobile phones and psychological problems.

Mobile phone addiction in general is an important research theme for several reasons. Despite the advantages and necessity of technologies for human society, due to their stimulating factors, they result in extreme use and lead to addiction. Young adults are more vulnerable to extreme phone use, and thus, become phone-dependent. Cholz (2012) indicated that mental health addiction to mobile phones among young people is a major concern today that can be considered a discussion in psychology and sociology. Despite these challenges, the findings align with Prensky's (2005) observation that young adults are finding creative ways to use their mobile phones for learning. However, many do not use their phones effectively, resulting in negative behavioral, economic, and psychological consequences.

CONCLUSION

This study, conceptualized in 2023, explored the rise of smartphone use among young adults in Zanzibar. The research revealed that mobile phones are popular not just for social networking and entertainment, but for meeting various needs including education, communication, and access to information. Mobile phone use varied across age groups, with younger adults, particularly males, using their phones for dating and adult content. However, religious laws and fear of violating the Tanzania Cybercrimes Act of 2015 may prevent full exploitation of mobile phone freedom. In conclusion, mobile phone use has both positive and negative impacts on the

behavior, economy, and psychological well-being of young adults in Zanzibar, depending on how they use these devices.

ACKNOWLEDGEMENT

The authors wish to acknowledge the contributions of the State University of Zanzibar for supporting this research. Special thanks go to all who contributed to making this study possible, including the research assistants and participants, particularly the youth of Zanzibar. The authors declare no financial relationships with any technological partners involved in this study.

REFERENCES

- Adarkwah, M. A., & Huang, R. (2023). Technology addiction, abduction and adoption in higher education: Bird's eye view of the ICT4AD policy in Ghana 20 years on. *British Journal of Educational Technology*, 54(6), 1484- 1504.<https://doi.org/10.1111/bjelt.13352>
- Alotaibi, M. S., Fox, M., Coman, R., Ratan, Z. A., & Hosseinzadeh, H. (2022). Smartphone addiction prevalence and its association on academic performance, physical health, and mental well-being among university students in Umm Al-Qura University (UQU), Saudi Arabia. *International Journal of Environmental Research and Public Health*, 19(6), 3710.<https://doi.org/10.3390/ijerph19063710>
- Babadi-Akash, Z., Zamani, E., Abedini, Y., Akbari, H., & Hedayati, N. (2014). The relationship between mental health and addiction to mobile phones among university students of Shahrekord, Iran. *Addiction & Health*, 6(3- 4), 93. <https://doi.org/10.52547/j.health.13.3.428>
- Blavatnik School of Government, University of Oxford. (2017). M-Pesa: A success story of digital financial inclusion. Retrieved from bsg.ox.ac.uk
- Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *Cyberpsychology & Behavior*, 8(1), 39-51. <https://doi.org/10.1089/cpb.2005.8.39>
- Choliz, M. (2012). Mobile-phone addiction in adolescence: The test of mobile phone dependence (TMD). *Progress in Health Sciences*, 2(1), 33-44.
- Cybercrimes Act. (2015). The Cybercrimes Act, 2015 of Tanzania. ISSN 0856-0331X.
- DANIDA. (2018). Country poverty assessment report. Ministry of Foreign Affairs of Denmark.
- De Oliveira, R., Karatzoglou, A., Cerezo, P., Armenta, A., de Vicuña, L., & Oliver, N. (2011). Towards a psychographic user model from mobile phone usage. In CHI '11 Extended Abstracts on Human Factors in Computing Systems (pp. 2191-2196). New York: ACM.<https://doi.org/10.1145/1979742.1979920>
- FinScope. (2017). Insights that drive innovation. Zanzibar Report. <https://www.fsd.or.tz/wp-content/uploads/2018/08/Finscope-Booklet-Zanzibar-eBook-Interactive-FINAL.pdf>
- Francke, E. (2007). South African youth and mobile technology impact. In 9th Annual Conference on World Wide Web Applications (pp. 1-19). Cape Town: The MXit Phenomenon.
- Gawas, A. U. (2015). An overview on evolution of mobile wireless communication networks: 1G-6G. *International Journal of Recent Innovation Trends in Computing and Communication*, 3(5), 3130-3133.
- GSMA. (2023). The mobile economy, Sub-Saharan Africa 2023. <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2023/10/20231017-GSMA-Mobile-Economy-Sub-Saharan-Africa-report.pdf>
- Haji, H. A., Shaame, A. A., & Kombo, O. H. (2013). The opportunities and challenges in using mobile phones as learning tools for

- Higher Learning Students in the developing countries: Zanzibar context. *Africon*, 1-5.
- Hassan, A. K., & Semkwiji, D. (2021). The role of mobile phones on sustainable livelihood. *The Economic and Social Research Foundation (ESRF) Discussion Paper No. 33*. ISBN 978-9987-610-63-1
- Hooper, V., & Zhou, Y. (2007). Addictive, dependent, compulsive? A research of mobile phone use. In *20th Bled eConference e-Mergence: Merging and Emerging Technologies, Processes and Institutions*, Bled, Slovenia.
- ITU. (2023). *Measuring digital development: Facts and figures*. International Telecommunication Union. <https://www.itu.int/itu-d/reports/statistics/facts-figures-2023/>
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Uses and gratifications research. *The Public Opinion Quarterly*, 37(4), 509–523.
- Kim, K., Shin, H. K., & Kim, B. (2011). The role of psychological traits and social factors in using new mobile communication services. *Electronic Commerce Research and Applications*, 10(4), 408-417. <https://doi.org/10.1016/j.elerap.2010.11.004>
- Kin, M., Lee, J., Park, S., & Kim, H. (2014). Mobile phone addiction among young adults: A growing concern. *Journal of Behavioral Addictions*, 3(2), 85-93. <https://doi.org/10.1556/JBA.3.2014.2.8>
- Liu, Q. Q., Yang, X. J., & Nie, Y. G. (2023). Interactive effects of cumulative social-environmental risk and trait mindfulness on different types of adolescent mobile phone addiction. *Current Psychology*, 42(20), 16722-16738.
- NBS. (2022). *2022 Population and housing census reports*. National Bureau of Statistics. <https://www.nbs.go.tz/>
- O'Keeffe, G. S., & Clarke-Pearson, K. (2021). The impact of social media on children, adolescents, and families. *Pediatrics*, 127(4), 800-804. <https://doi.org/10.1542/peds.2011-0054>
- Pinchot, J., Paullet, K., & Rota, D. (2011). How mobile technology is changing our culture. *Journal of Information Systems Applied Research*, 4(1), 39.
- Prensky, M. (2005). Engage me or enrage me. *Educause Review*, 40(5), 61-64.
- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, 3(1), 3–37.
- Tan, W. C. K. (2022). *A practical guide for students and researchers: Research methods*. World Scientific.
- Vaterlaus, J. M., Aylward, A., Tarabochia, D., & Martin, J. D. (2021). A smartphone made my life easier: An exploratory study on age of adolescent smartphone acquisition and well-being. *Computers in Human Behavior*, 114, 106563. <https://doi.org/10.1016/j.chb.2020.106563>
- Walsh, S. P., White, K. M., Cox, S., & Young, R. M. (2011). Keeping in constant touch: The predictors of young Australians' mobile phone involvement. *Computers in Human Behavior*, 27(1), 333-342. <https://doi.org/10.1016/j.chb.2010.08.011>
- Zantel. (2024). *Mobile phone subscribers*. Zanzibar Telecom Ltd. <https://zantel.co.tz/>