RESEARCH ARTICLE

Beyond ICT Access and Use: Are Young Women of Mathare Leveraging the Potential of ICTs?

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ABSTRACT

ICTs are an invaluable tool in empowering women in underprivileged societies. However, evidence lacks on how young women of Mathare use ICTs to counter unemployment and a lack of essential services that disproportionately impact them. The article discusses the empowerment of young women in Mathare through ICTs, specifically the radio and mobile phones. The analysis indicates that, in numerous cases, radio has enabled young women to shape the conversation on issues affecting them and have useful information on improving their living conditions. Likewise, mobile phone ownership and the acquirement of ICT skills resulting in young women's financial inclusion and participation in multiple home-based and income-generating activities have facilitated digital empowerment. However, young women's low socio-economic status and limited knowledge on the benefits of ICTs were the main barriers to realizing the outlined potential. The article concludes with implications for radio stations and telecommunication providers that seek to advance young women's empowerment.

Key Words: Empowerment, ICTs, Informal Settlements**,** Mathare, Young Women.

I. INTRODUCTION

The rapid digitalization in the global landscape continues to transform the different facets of our lives, albeit to varying extents. For women, particularly in developing countries, inequalities in access to information and opportunities before the technological changes are constantly replicating in the digital world. As a result, there is an emphasis on improving women's access and use of ICTs to enhance their capacity in the information society. The realization of ICTs transformative potential is essential in attaining women empowerment. Batliwala (1994) conceptualizes women empowerment as the ability of women to influence external actions relating to their welfare and well-being.

Through empowerment, women have control and the capacity to have choices and individually or collectively can transform their choices into the desired outcome. The dimensions women empowerment manifests include economic, socio-cultural, interpersonal, and political dimensions (Singh & Vanka, 2020). The scope of empowerment varies depending on the dimension and the realities of the women in question. For instance, economic empowerment through information communication technologies (ICTs) is dependent on women's access to these information technologies. Globally, women utilize ICTs less than men (Iglesias, 2020). The

inequalities in access imply that women are less likely to be socially and economically transformed through the access and use of ICTs (Rashid, 2016). However, training in information technologies promotes gender empowerment for the under-served women in low and middle-income countries (Livingstone et al., 2017). In Kenya, greater access to ICTs contributed to the uptake of mobile phones among school-going girls in Nairobi, which facilitated multiple uses of mobile phones such as leisure, socialization, and education (Zelezny-Green, 2018). This research investigated the role that ICTs play in the lives of young women in Mathare, Kenya, to ascertain the impact ICT has on their personal and professional goals.

A. Problem statement

The informal settlement of Mathare is heavy-laden with unemployment, drugs, gangs, and a lack of essential services, which makes living conditions difficult for young women (Kovačič & Lundine, 2013). Empirical evidence by Wamuyu (2017) indicated that residents of Mathare do not have access to ICTs such as mobile phones, limiting their engagement in the digital world. The survey findings mirror a study by Githaiga and Nyabuga (2020), which elucidated that problems such as limited digital literacy, limited knowledge of their benefits, affordability and language barriers deter the full utilisation of ICTs among young women in Mathare. It appears that although Mathare residents are on the wrong side of the digital divide, there is a possibility that the women within these groups face especially more difficulties because the prevailing culture has not fully promoted gender equity. Considering Kenya's government focus on rapid digitalisation and the wide availability of mobile communication technologies within the country, the study intends to uncover how young women in Mathare are harnessing the power of mobile communication technologies.

B. Study Objective

This study investigated the empowerment of young women in Mathare informal settlements through ICTs, specifically the radio and mobile phones.

II.   LITERATURE REVIEW

Empowerment of Young Women through Mobile Communication Technologies

Women in low- and middle-income countries are 8% less likely than men to own a mobile phone and 20% less likely to use their phone to access the internet (Rowntree & Shanahan, 2020). Fewer women than men own internet-enabled phones, a clear indication of women's unequal access and use of mobile phones. However, the gap in mobile internet access is narrowing in South Asia, bringing an addition of 78 million women online. In India, for instance, training in the use of ICTs, particularly smartphones, contributed to improving women's digital skills to the extent that they utilized these skills to seek more job opportunities, improve their businesses and augment their income (Nayyar et al., 2019). The broad capabilities of smartphones present countless opportunities for women in patriarchal societies with restrictions on women. Specifically, In Iran, mobile internet has expanded the scope of opportunities for women, where the internet-enabled Iranian women engage in online businesses, thereby positively impacting their economic lives

(Golzard, 2019). Though there are provisions of gender equality in Kenya, it is still unclear how young women in informal settlements of Mathare utilize mobile technology to transform their lives' social and economic dimensions. Further, though Nayyar et al. (2019) & Golzard (2019) offer optimistic perspectives on the potential of mobile technology in empowering women, they only capture economic empowerment. Dimensions of women empowerment such as socio-cultural, interpersonal and political are just as important in considering the extent to which mobile technology enhances women's ability to determine the direction their lives take. Hussain and Amin (2018) reaffirmed this position by elucidating that though mobile technology made it possible for Afghanistan women to earn an income, they could not go against the patriarchal power relations. They could not use the internet to acquaint themselves with information on their right to divorce or share incidents of abuse privately on social media platforms because of the likelihood of social repercussions. However, a few women rejected this control, thereby furthering their empowerment and putting a dent in the patriarchal relations.

Therefore, there is more to women's empowerment than just economic empowerment. There is thus a need to uncover to what extent mobile technology improves other aspects of women's lives in Mathare. Abubakar et al. (2017) espoused that WhatsApp social media platform contributed to women's empowerment in Nigeria by expanding their freedom of expression and enabling their active engagement in economic, social, and political activities. They could, however, not benefit from the platform fully because of the costs of access to the internet. Porter et al. (2020) offer a different perspective by asserting that there is limited evidence to support the assertion that mobile phone ownership has contributed to positive female empowerment across South Africa, Malawi, and Ghana. These authors argued that mobile phones constrained women's empowerment since the primary focus was on romantic and sexual relationships instead of entrepreneurial and educational trajectories. The implication is that, in some cases, the use of mobile phones is counterproductive to women's development and growth, and it creates new unprecedented, and unforeseen problems and challenges. In light of the varied perspectives on women empowerment, the current study intended to uncover young women's possible empowerment or disempowerment through mobile phones.

III. METHODOLOGY

The research adopted a qualitative approach as it facilitated an in-depth understanding of how radio and mobile phones empower young women. The study focused on the Mathare Pioneer Youth group as a case study. Case studies aim to gain an in-depth analysis of situations and meanings for those involved (Hancock & Algozzine, 2017). Thus, the study can offer extensive research of necessary details and an understanding of women's empowerment in the context of young women of Mathare.

A. Participants

Young women of the Mathare Pioneer youth group comprised the study population. The group accommodates vulnerable community members, with most orphaned by HIV/AIDS or from vulnerable single mothers' households. These young women's ages average twenty-three years. Challenges such as limited access to ICTs have deterred young women's participation in the digital world. Further, the fact that most of these young women lack a high school level of education presents a challenge where they cannot utilise more than the basic functionalities of ICTs to attain

empowerment. Mathare Pioneer youth group comprises 13-member groups, and from this population, the study employed purposive sampling to select 13 young women.

B. Research Activities

The study was qualitative and utilised in-depth interviews and focus group discussions (FGD) to collect data. The FGD comprised thirteen young women from diverse backgrounds drawn from the Mathare Pioneer youth group. The FGD interrogated financial inclusion through mobile phones, facilitation of multiple roles by women, and barriers to empowerment. On the other hand, in-depth interviews captured individual views of young women. There was a purposive selection of six young women who participated in the FGDs for the in-depth interviews. The rest of the members of the FGD confirmed these six as the right ones to offer deeper information on empowerment through radio and mobile phones. The in-depth interviews delved into young women's use of radio and mobile communication technologies and barriers to utilising these ICTs for self-improvement and advancement of women in informal settlements.

C. Procedure

The chair of the Mathare Pioneer youth group recruited the participants of the FGD and in-depth interviews. The inclusion criteria considered participants invited due to the characteristics required by the study and accepted the invitation. Participants in the study were a mix of ICT savvy young women and those who had little knowledge of ICTs and only listened to the radio. As a result, the sample made it easier to gather various complementary perspectives on young women's empowerment through ICTs. Before the FGD and in-depth interviews, the researcher obtained consent from the participants.

D. Data Analysis

The qualitative data collected on the empowerment of young women through radio and mobile phones using focus group discussions and in-depth interviews included perceptions of young women on the social and economic transformation through these ICTs and barriers to empowerment. The data derived from the in-depth interviews were analyzed under thematic areas. The FGDs were transcribed, analyzed, and interpreted according to themes. These FGDs highlighted how young women reached a consensus and had one voice on their empowerment through radio and mobile phones.

IV. RESULT & DISCUSSION

A. Empowerment Through Radio

The young women noted that they are loyal to certain radio stations. Specifically, they listened and regularly interacted with Ghetto Radio 89.5 FM programs because it airs content relevant to their lives. Situma had this to say:

"Whenever the radio station airs content relevant to us, such as conserving the environment, most of us send text messages or call to participate in the discussion. We have taken the initiative as Mathare Pioneer youth group to organize cleanups every other Saturday. It has created awareness within our locality as people are more responsible when disposing of waste. Some group members have been able to earn an income by collecting garbage from the different localities in Mathare. Without the show, we would not have had the idea of cleaning our environment and at the same time creating an opportunity

for an income for some of our members (Situma, Mathare Pioneer Youth Group member)."

The active participation of young women in discussions that directly touch on their lives is, without doubt, empowering to them. Specifically, young women felt that the information they shared was vital in improving the lives of the slum dwellers. Also, they were capable of getting ideas on conserving the environment and improving their living standards. The information they shared shaped the conversation on addressing environmental conservation, unemployment, poor sanitation services, and drug abuse.

B. Empowerment Through Mobile Phones

The mobile phone is an indispensable asset for the young women of Mathare. Through their mobile phones, they can socialise, use them as a source of entertainment, conduct mobile money transactions, advertise their businesses, among other uses. Empowerment of young women through the mobile phone was as follows:

C. Banking Services

In collaboration with Kenyan banks, mobile money providers have made it possible for users to conduct banking services with their mobile phones. Therefore, users can withdraw money from their bank accounts without going to the bank or an automated teller machine physically. Also, the transactions can be conducted at users' convenience irrespective of their physical location. One of the in-depth interviewees observed that:

"Banking services via mobile phone are convenient for conducting financial transactions from any location. The only exception is that you need a mobile money agent to withdraw your money. My phone allows me to operate a banking application that I can use to pay for electricity, school fees, and shopping. The transaction costs are relatively low, thereby affordable for most women in Mathare (Dinah, hairdresser)."

The mobile phone has facilitated affordable and convenient banking services, allowing young women to engage in different financial transactions safely. There is also financial outreach to the underprivileged in the society where in the past, small depositors could not open a bank account; hence the little money they saved had to be hidden in their houses. With the mobile phone facilitating banking services, individuals are motivated to save money. Specifically, the FGD participants noted that they saved as little as Ksh100 accrued from the businesses they engaged in within the community. Some of them accumulated savings to the tune of Ksh 20,000, which they used to pay school fees for their siblings (FGD members of Mathare Pioneer youth group). Undoubtedly, the mobile money platform has enabled financial inclusion and contributed to the empowerment of young women in Mathare.

D. Loan Facility

The introduction of loan facilities by some telecommunication operators has been a game-changer for mobile money transactions in Kenya. Significantly, the advent of M-Shwari allows for both saving and borrowing so long as one is subscribed to the M-PESA service. Users can get a loan facility that attracts a 7.5% facilitation fee and a thirty-day grace period. Some of the women

in Mathare had borrowed loans from M-Shwari and started businesses. Nafula had this to say regarding the loan facility:

> *"For the past two years, I have been borrowing money via M-shwari. I borrowed money to pay bills at the onset, but with time, my limit grew, and I managed to borrow Ksh5,000 to start a fruits business within Mathare. I borrowed money to buy a blender, a table, a few chairs, and fruits for the business. Within five weeks, I had made enough money to repay the loan and interest. As my business expanded, the loan limit grew to Ksh13,000 (Nafula, fruit vendor)."*

Mobile money loan facilities, particularly from M-shwari have contributed to the empowerment of some young women. The advantage of the service is that subscribers are rewarded for repaying the loan in time with an increased loan limit. Consequently, it is possible to borrow money to facilitate the running of businesses and repay it before the due date. Besides, the young women cannot be taken advantage of by shylocks who charge exorbitant interest charges for the loaned money. Overall, there is empowerment through the loan facility.

E. Facilitation of Multiple Roles by Women

FGD members of Mathare Pioneer youth group narrated how one of them ran a day-care, which made it possible for the women in the informal settlement to engage in other businesses with an assurance that their children were safe. The lady created a WhatsApp group that enabled her to coordinate her day-care. Parents would get information on when to drop and pick their children and their general welfare. She also considered that some parents owned feature phones and therefore received information through text messages. The efficient management of the day-care attracted more parents and resulted in the expansion of the day-care business. To supplement her income, she also sold mandazis. The lady ran both businesses primarily because she would source her clients through word of mouth and social media handles. In the evenings, she would make mandazis and distribute them to shops with a Boda Boda (motorcycle taxi) rider. Through both businesses, her standard of living had improved to the extent that she was planning to relocate to a bigger house within the neighbourhood to accommodate more children in the day-care and have sufficient space for the mandazi business. Accordingly, mobile phones facilitated young women's multiple roles, and in so doing, women could contribute to income-generating and home-based activities. Also, the implication was that there was a relative improvement in the socio-economic status of women with ICT literacy.

F. Barriers to empowerment through mobile phones

The study observed barriers to empowerment through mobile phones related to gender. Mainly limited digital literacy, limited knowledge on the usefulness of mobile communication technologies, cultural factors, and young women's socio-economic status. The barriers are as follows:

G. Socio-economic status of young women

The young women of Mathare were aware of the empowering potential of mobile phones. However, their socio-economic status hindered their full utilisation of mobile phones. Due to limited time, they were reluctant to register for training on making effective use of mobile communication technologies and exploring the opportunities thereof. The majority of them were

at the time contented with the basic functionalities of text messaging, making calls, and mobile money. Some were willing to learn more but were unable to afford the training. The young women indicated several challenges that they were exposed to in the slum, where they struggled to fend for their families and siblings and had to pay their school fees. Therefore, their time was limited, and the time to dedicate to learning more or practising on utilising more than the mobile phone's basic functionalities was lacking. Nevertheless, they were interested in finding out new things. If offered free ICT education and assured of opportunities in the ICT field, they were willing to dedicate time to learn more about ICT (FGD members of Mathare Pioneer youth group).

H. *Cultural barriers*

Cultural bias towards women had negatively impacted their uptake of mobile phones. The socio-economic status was already limited, but cultural biases towards women made the situation worse. Chelangat (Mathare Pioneer youth group member) noted that some parents forbade girls from mobile phone ownership since they believed that the gadgets would encourage them to have sexual relationships with men. Besides, women were afraid of using mobile phones because of the notion that it would lead to the breakup of their families (FGD members of Mathare Pioneer youth group). Also, most women revealed that they had been accused of infidelity whenever their phone would ring more than their partner's.

I. *Limited knowledge on the usefulness of mobile communication technologies*

The study established that young woman of Mathare were unaware of the benefits of mobile phones. For instance, they believed that social media tools such as E-mail had no potential to offer them economic benefits. This observation was made by women who were struggling to make ends meet. They found the use of social media as an avoidable expense. Instead, they would dedicate their limited resources to other activities other than mobile communication technologies.

V. CONCLUSION

The outcome of the empirical study of the utilisation of ICTs by young women of Mathare points towards empowerment rather than the possibility of reproducing inequalities. Notably, Ghetto Radio, in particular, had given the young women a voice in a rather patriarchal community whereby their views were often neglected. That way, they could shape the conversions on unemployment and poor sanitation that made life difficult in the slum. Besides, they were made aware of job opportunities and measures to improve their living conditions. Further, the use of mobile phones was empowering for the young women of Mathare. The young women's technical skills in mobile telephones initiated the empowerment process in such a way that they capitalized on mobile phones for mobile money transfer services, banking services, saving money and borrowing loans. Some had gone to the extent of starting and expanding their businesses due to these mobile money loans that did not require collateral, resulting in empowerment. Finally, mobile phones enabled young women to engage in home-based and income-generating activities concurrently.

VI. RECOMMENDATIONS

Radio stations need to expand their reach in informal settlements to enable more women to access information on job opportunities and activities they can engage in to earn an income. Also, the stations could demystify myths associated with women's use of ICTs, making young women feel they are valuable and can contribute to the betterment of Mathare. Further, telecommunication operators could develop strategies whereby their users could pay for internet-

enabled phones in instalments. The eventual outcome would encourage the uptake of internet-enabled phones in the informal settlements enabling the women to explore mobile communication technologies in transforming the different aspects of their lives, thus possibly contributing to the attainment of other components of empowerment such as political and social dimensions.

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