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Identification and Analysis of Factors for Health Initiative Sustainability and ICT Impact: A Case of Rural Areas of Tanzania

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Abstract

This paper examines the factors influencing the sustainability and failure of rural health initiatives by conducting a literature review and administering questionnaires in the regions of Mwanza and Simiyu. The study identifies key factors responsible for the initiation, sustainability, and failure of such initiatives. Relationships between these factors and the data obtained from the questionnaires are analyzed and discussed. The findings from this analysis will be utilized in the development of a planning tool to aid in the planning and prediction of the sustainability or failure of health initiatives, particularly in rural areas of Tanzania.

Keywords: Sustainability, community, health initiative

1. Introduction

Tanzania has made substantial progress in the area of health (Martin, 2014). Life expectancy of its people has improved and child mortality has declined rapidly. However, Tanzania still faces many challenges in health sector such as lack of access to high-quality health services especially in rural areas and this is due to the reason that large 71% (MoHSW, 2015) population of people live in rural while most of health resources are in urban (Levira & Todd, 2017). According to the latest Population and Housing Census of 2012, Tanzania Mainland had a population of 43,625,354 which comprised of 21,239,313 males and 22,386,041 females with an average annual growth rate of 2.7%. In 2015 the projected population is 48,366,270. The crude birth rate is 41.6 per 1,000 people, and life expectancy at birth is 63 years for women and 60 years for men. Less than one third 29% of the population resides in urban areas, whereas the majority 71% of the population are rural dwellers.(Tanzania Bureau of Statistics, 2014).

So as to meet the Goal 3 of the Sustainable Development Goals (SDGs) by 2030 which emphasises on good health and well-being where by combating HIV/AIDS, malaria and other diseases is among of the strategic plan, different government and private stakeholders have decided to plan and initiate different health projects (Health Initiatives) so as to solve health challenges in different areas. Several health initiatives such that of fighting against major diseases such as Malaria, HIV and Tuberculosis were initiated and implemented (MoHSW, 2015). Though different Health Initiatives (HI) tends to have good progressive and impressive results in urban areas, the situation is quite different to the projects of the same kind being taking place in rural areas (Levira & Todd, 2017). In today's restricted funding environment, planning of health initiatives requires proper utilization of the existing resources within and outside the society to meet the targeted goal, and also exploring innovative ways to improve current health initiatives so as to achieve the targeted SDGs by 2030. Furthermore in recent years, program sustainability has been an issue of growing concern and more attention is given to the long-term viability of health intervention programs, different stakeholders become increasingly concerned with allocating scarce resources effectively and efficiently. It is evidenced that community based projects are very important in rural areas where majority of population in developing countries dwells (Oino, 2015) due to the solutions they provide.

In Tanzania, despite the efforts and contributions like that of PEPFAR to enhance and strengthen different Health Initiative in rural areas through various capacity

building training such as "WAJIBIKA" still the achievement of these health initiatives is very low in rural areas when compared to urban areas, as a result most of these health initiatives fails to meet the targeted goal on time so to optimize the return on investment of the project. Since several reports shows that most of the health initiatives progress are very low in rural areas (MoHSW, 2015), (*United Republic of Tanzania Ministry of Health and Social Welfare The National Road Map Strategic Plan To Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania, 2008*) which in turn leads to health status in rural areas being generally not as good as compared with urban areas (Strasser, 2018) , thus there is a great need to have "a planning tool which may enhance health planning initiatives before implementing the project ".This may provide awareness on how project must be implemented inorder to reach the desired goals with better results and within the planned time. Hence, this research will investigate the need of having a tool to predict and visualize the development so as to enhance planning of various Health Initiatives in rural areas.

2. Literature Review

2.1 Factors that affect health initiative success in rural areas

(Argaw and Fanthahun, 2007) emphases on the level of Community participation on the project has a direct impact towards success and the overall sustainability of the initiative. It argues to what extent community is involved in the project citing areas like decision making and implementation.A study by (Ceptureanu & Sebastian, 2018) elaborate on factors associated with health project sustainability and success. It points out three categorise as factors related to program itself, related to host (implementing) organisation and related to the community where the program is operationalized.At the end the study ranks the most important 22 factors for community based programs sustainability.Furthermore studies reveals that success of of health initiative and overall community based projects depends on several factors, some of those are community participation, Financial support, Planning, Monitoring and Evaluation, Leadership Capacity of Community Leaders and Community awareness about different projects (Harvey and Reed, 2007; Lachapelle, 2008; Nwankwoala, 2011; and Nkongo, 2009). Lachapelle (2008), insist on community participation as factor for health initiative success.This create a sense of ownership and interest towards the initiative(As their views are taken into considereation and they participate on some decission making) .

A study by Norman (2012) reports the reasons for failure of community-based projects specifically at Folovhodwe area. Factors like "lack of funds, poor project management, poor management of funds, lack of commitment and motivation,

low level of education of project members, lack of community involvement, lack of planning, monitoring and evaluation by government officials and community leaders, lack of training and unavailability of workshops for project members and lack of government involvement in addressing challenges were identified as the reasons for failure of community-based projects”.

2.2 How ICT applications have been used to improve planning and efficiency of initiatives

Different studies reveals the role of ICT and its impact in different sectors and health being one among them (Lewis, 2012).It has been reveals that, management information systems has a great role towards information accessible and in guiding decision-making in different organizations regardless of its challenges (Babaei & Beikzad, 2013) . A study by (Ori, 2010) discusses the role of decision support systems as a mechanism to facilitate collaborative health decision-making. It elaborate healthdecision support system as an online tool for health planners using geographic information systems.(Laura Hosman, 2008) gives an overview of both theory and the current state of ICT-related development projects, the article provides a case study of a Sri Lankan-based pilot project involving multiple stakeholders. This case reveals important success factors that can be applied to future developing world ICT projects. It shows how information and communications technology (ICT) to the developing world and especially to rural areas have the potential to empower the disenfranchised, foster economic opportunity, and narrow the digital divide that threatens to widen global disparity between the haves and the have-nots.Another study reports on sustainability of ICT project in rural areas. It first point out the importance of ICT and it role played in different projects in developing countries and lastly it propose a model that sets sustainability guidelines/planning for ICT project management in rural areas (Pade-Khene, 2011).“Rural development is significantly enhanced and supported by Information and Communication Technology (ICT)” (Caroline ,Pade; Brenda, 2008).Regardless of some challenges, this study reveals the extent of the application of these critical success factors of sustainability and success of these health initiative. (Bagayokoa, Anneb, and Fieschi, 2011) study demonstrated from actual projects that ICT can contribute to the balance of health systems in developing countries and to equitable access to human resources and quality health care service and planning.

As per the literature reviewed, it has been revealed that there is a need for further intervention on health initiative especially in rural areas where most either fail or

never produce what it was intended for. Many cases indicate that there is still a challenge that's needs to be addressed regarding Health Initiatives planning especially in most developing countries.

3. Methodology

This section focused on the research method that were followed during the study. The main purpose of the the study were to review the current running health projects/Initiatives in rural areas of Tanzania, their challenges and how to overcome those challenges. The results of this study (especially factors) will be an input to the design and development of a web-based planning tool necessary for project sustainability.

3.1 Study area

This study was carried out in Mwanza and Simiyu, Tanzania. We consider these regions based on evidence of existence of different community based projects such as health, water, education, agriculture, and other projects introduced by the Government, donors and non-governmental organizations (NGOs). Also presence of more healthcare projects/initiative as well as key informants from health care workers, preferably supervisors or staff in-charge in health institutions, this is according to HIV/AIDS and Malaria Indicator Survey 2011 and national bureau of statistics (2013).

3.2 Participants

The study uses both probability and non-probability sampling techniques to get a sample size of 178 respondents (Table 1), to which 100 were administered questionnaire and 78 were interviewed. Also as per nature of our study, simple random sampling technique was used to obtain study participants (Adam and Kamuzora 2008). Studies reveals that this method is very useful as it gives each participant an equal and independent chance of being selected (Shaughnessy *et al.* 2000).

Table 1: Number of Participants

SN	Respondent	Number of Respondent	
		Mwanza	Simiyu
1	Community leaders	15	8
2	Community members	35	20
3	Organizations employees	45	19
4	Project planners	20	3
5	Project managers/Project supervisors	10	3
	Total	178	

3.3 Data collection and analysis

A cross-sectional study was deployed in 23 health initiative which were selected at randomly. Data collection included the use of structured questionnaires and interviews. Through guided questionnaires, data from 100 respondents was collected in order to analyze the current state of the selected sample of health projects. Also semi-structured interview was used where by 78 respondents were interviewed to assess factors and strategies for or hindering program sustainability and to determine the level of services being sustained. Statistical Package for Social Sciences (SPSS) was used for data analysis. We present the findings in table 3 for easy readability and interpretation of data. The significance was tested using a p-value of $p = 0.05$ with a confidence interval of 95%. Review of existing documents such as journal articles and official reports related to the topic under study was done to provide a wider understanding of the issues under research.

4. Results

4.1 Participants views on sustainability factors

The study involve a total of 23 HIV/AIDS health initiative/projects that were selected at randomly from two regions (Mwanza and Simiyu) as indicated in Table 2.

Table 2: Number of Health initiative involved in this study

S/N	Place	Number of Health initiative	Total
1	Mwanza	15	23
2	Simiyu	8	

Then an analysis of factors associated with sustainability of health initiative /projects was done. Results from questionnaire and interviews reveals several factors which were inline with findings form different studies. Further more studies reveals that,for examining community projects sustainability , several factors are to be considered (Sebastian, 2018). The Table 3 below are key study observations on the factors associated with health initiative /project sustainability.

Table 3: Participants views on sustainability factors

Factors	Participants	Value		
		Satisfied	Normal	Poor
Community participation	75	30	40	5
Program effectiveness and flexibility	35	15	20	-
Understanding the community and its context	22	12	10	-
Program evaluation	14	6	7	1
Program effectiveness and flexibility	17	7	8	2
Leadership and Organizational stability	15	8	5	2

4.1.1 Community participation

Studies point out that ; community/society participation in any project brings about ownership of that project to the society (Olukotun, 2017). With this sense of owning, its implementation to success or failure can be easy addressed.

In our study the results were very close to other studies as 40% of interviewed stakeholders from 23 projects are satisfied with their involvement in project,53% indicates they are well with current participation in the mentioned project and only 7% were unhappy with the level of participation/collaboration with and within the project.Studies point out that community participation is very important especially at this era that can influence sustainability of community based projects (Luchian, 2018; Noori, 2017; Olajuyigbe, 2016)(Luvenga et al., 2015).One study point out that “project is sustainable if the community/beneficiaries are capable on their own without the assistance of outside development partners, to continue producing results for their benefit for as long as their problem still exists”.

4.1.2 Program effectiveness and flexibility

A number of studies show that the ability of a project to change in accord with changing circumstances can significantly affect its chances of survival.Also,it is evidenced that “the projects that underwent changes and modifications in the course of their implementation had better chances of being sustained than projects that stuck to their original pattern”.About 44% of the stakeholders interviewed has a positive view on most of the project effectiveness,11% report poor project effectiveness and flexibility ,although 55% indicate that their leaders are doing their work with huge effort but in some situations they fail and reasons for failure are not well addressed.

4.1.3 Understanding the community and its context

Studies reveals that about 55% respond positively, that most of the initiative/project are inline with the community and they address key community context. Although, in some cases most of the projects lose focus on the way. Some responded that "Some ledares tend to lose focus and hence miss the whole picture and deviate from the initial objectives". Other said political intervations has an impact and sometimes causes some of the projects to deviate for community context and expectations which inturn has an impact to sustainability.

4.1.4 Program evaluation

Project evaluation can help in the development of strategies for sustainability, to follow up their implementation, and to evaluate their effectiveness.It is with program/project evaluation strategies for sustainability can be made, identifying problems andfacilitating flexibility in the project . 50% of respondents indicate that the task is not clear,mentioning some of the challenges are in the overall process of evalution, time taken for evalution and participation factor.

4.1.5 Leadership and Organizational stability

Reseacher reveals that on the case studies projects,organizational capacity, proper communication within the organization, program evaluation, implementation and flexibility for sustainability purposes may enhance sustainability if leaders are committed to those factors and there is a proper organisation structure. Furthermore literatures points out that; institutional effectiveness, integration with existing programmes, congruency of programme with organisational mission are key for project sustainability. Table 4 indicates intervived stakeholders (53%) who show postive response to organaization nature and how they handle matters for stability of their projects.Only 1% were unsatisfied with currect organaiton and leaders ways for project future and its sustainability.

Table 4: General society views on project sustainability

Views	Frequency	Percentage (%)
Satisfy	42	41.2
Poor	36	35.3
Normal	24	23.5
Total	102	100

5. Discussion

This study reveals that the current health initiative states in Tanzania rural areas are still faced with a lot of challenges. Although there is a policy to direct what to be done and how, the situation is quite different as per the outcomes when considering sustainability. In most cases the reasons being poor community participation which remove/ make that community not to have the feeling of ownership to such initiative, hence community support become poor (Boru.A, 2012). Also, program effectiveness and flexibility were found to be among the factors towards or against sustainability as reported in our results. Understanding the community and its context and Program evaluation also has an impact in different projects. Leadership and Organizational stability are key to sustainable community based project as addressed in our results. These findings support the findings in previous studies (Ahmed, Sabbil, Haroun, & Adam, 2015; habtamu, 2012; Kamuzora & Gilson, 2007; Mlage, 2014).

Sustainability of these health projects is an important aspect towards achieving good health care service delivery and to meet the Millennium Development Goal by 2025 .As that fact stands, in our study, we found out that almost 86.3% of the projects they do operate but with challenges. Several factors were recognized that are concerned with this situation, the common one being program evaluation are not consistence to most of the initiative although most of them operates almost on the same basis with almost similar environment conditions. However, project evaluation requires program staff to be pushed to do evaluation by external mandates from funders, authorizers, or others, or they may be pulled to do evaluation by an internal need to determine how the program is performing and what can be improved and this is achievable if staff see the results as useful information that can help them do their jobs better. We also found out that understanding the community and its context is vital to sustainability. Community have their norms and values which can bring or limit involvement of certain groups. Studies reveals that some planning and implementation strategies may be shaped by community demographics and economic conditions .Results suggest that community context plays a substantive role in shaping how community-based health promotion projects unfold (Kegler, 2011) .In the literature, several other factors other than this have been discussed (Mijnarends, 2011; Mlage, 2014).

On the other hand, community participation is important for any community development project to succeed, a project must have the support of its community, right from the start. That is community awareness and involvement in

project planning and implementation. Studies reveals that the level of community participation determines whether the program becomes established, how quickly and successfully it consolidates, and how it responds and adapts to meet changing needs. Our study reveals that 41% of interviewed stakeholders based on metioned factors as indicated in table 3 as satisfied with those factors implementations in their organaisation, whereas 35% report poor and 24% found it normal.

6. Conclusion

In this paper we presented factors and an analysis associated with health initiative sustainability in community health initiative/projects and ICT impact. This paper indicate that; sustainability is a dynamic process, and that goals and strategies for achieving it must continuously adapt to changing environmental conditions and commitment. The study recomends that, introduction of appropriate way of conducting awareness by the public and government officials on matters concerning health initiative /projects sustainability. Increasing awareness to different stakeholders and impact assessment stakeholders,and the need to adopt sustainability impact assessment as a policy to assess sustainability goal.

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