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TABLE OF CONTENTS

Editorial	02
Malaria Chemoprevention in Pregnant Women in Africa <i>Godfrey Martin Mubyazi</i>	04
Male Involvement in Antenatal Care: Does Socio-demographic and Background Characteristics Matter in Zimbabwe? <i>Vhembo, N. Mangombe K. and Muchabveyo B.</i>	22
The Paradox of Curriculum Changes for Ordinary Level Secondary School Students in Tanzania <i>Fulgence Saronga S. Swai</i>	32
Access and Use of Information on Cervical Cancer Prevention among Rural Women in Mtwara, Tanzania <i>Martha S. Sware and James E. Kazoka</i>	46
Using E-Mails in Studying the Graduate Employee Organization <i>Fulgence Saronga S. Swai</i>	68

EDITORIAL

Background: We keep emphasizing that research and publications are among the core functions of universities around the world. Unfortunately, only a tiny number of academic staff at most of the private universities in Tanzania are involved in research and the number of publications is very small. This is not acceptable. The editorial of this issue suggests that universities especially those owned privately need to go back to the drawing board to look for ways of changing the research and publication culture.

Research Directorate: It is important to establish a directorate for research that reflects what the institution is planning to achieve. In most cases, there is a mismatch between the structure and composition of staff in the research directorate vis-a-vis the list of functions attached to it. In addition, there must be scrutiny of the facilities required for such a directorate to be able to perform its duties without too much hustle.

Realistic Research Budget: Research activities and publications need funding. The first recommendation is to request these universities to establish a budget specific to research-related activities. This budget may change from time to time based on the financial situation of the university. There must be a committee that is responsible for the disbursement of research funds, not an individual. The initial budget should be able to cover the cost of writing large proposals, seek funding for small research activities, cover publication costs including page fees for journal articles, etc. The second recommendation is to support staff members financially who want to attend conferences to present papers if there is no other source of such support. These papers should be listed in the conference programme. If packaged well this can be a clear motivation for people to do research and write papers. Finally, the cash incentive should be introduced as a starting point intended to change the research culture. For instance, an amount of T. Shs 200,000/= per paper published can be a starting point.

Capacity Building Workshops: Most of the staff at these universities are juniors and their highest qualification is a Master. This implies that they will need support to be involved in research activities and publishing. It is recommended that these universities establish a workshop series aimed at capacitating the junior staff. Facilitators should be people from within the university to cut down costs unless nobody has the required skills. The suggested topics include: how to write a paper for publication; how to convert a dissertation to a journal article; how to improve writing skills; research methods, writing fundable research proposals, etc.

Mentoring Programmes: Junior members of staff should be encouraged to co-author their papers with senior members. If done with a good heart, a vertical mentoring programme can go a long way in developing the skills, experience, and confidence of junior staff members.

Strong Postgraduate Programmes: It is very difficult for a university to excel in research without establishing strong Master and PhD programmes.

Clear Appointment and Promotion Criteria: Although most universities have a clear policy for appointments and promotions stated in the HR Manual, its implementation is still problematic. Since each academic rank is attached to a certain number of units cumulated by publications, then it should be straightforward for a staff member to be promoted if she/he has enough units and no one should be in any academic rank if she/he has no enough units in his/her research portfolio. In addition, accelerated promotions should be introduced for those who are doing well in terms of publications and non-renewal of contracts should be applicable for those who do not publish unless there is good justification.

Necessary Policies / Guidelines / Software: Every university must have the following as a bare minimum - Research agenda; Research policy; Publication policy; Research Ethics Committee; Plagiarism policy; Institutional property rights policy; Institutional repository; Anti-plagiarism software; and Data analysis software.

Other Ideas: The following is the list of additional things which may motivate staff to be involved in research: 1) The universities need to establish a 'research day' for every academic staff member. Usually, academic staff members are busy every day of the week teaching which means there is no time for them to do research; 2) Staff need to be encouraged to create a culture of doing research as a team i.e. multidisciplinary; 3) Each faculty/school need to establish a list of journals that staff can concentrate on to avoid predator journals; 4) These universities should create research partnerships with the government, the industry, local and international NGOs; and 5) Universities need to organize national/regional/international conferences periodically.

Professor Akim J. Mturi
Editor-in-Chief

Malaria Chemoprevention in Pregnant Women in Africa

Godfrey Martin Mubyazi¹

Abstract

Malaria keeps claiming the lives of millions of pregnant women and children in the world, especially in developing countries. Pregnant women and children under the age of five years are the most vulnerable groups mainly because of their lower immunity statuses, compared to the general population. Efforts towards elimination of malaria by 2030, face challenges in the area of acceptability and operational feasibility of the recommended interventions, malaria chemoprevention in pregnancy being amongst them. Such challenges include physical and financial accessibility of the recommended services, besides the perceived quality of care, and social-cultural values such as norms and traditions that excessively suppress women and deny them of their right to access the recommended services in a timely manner. Many studies have focussed on issues of individual and community health seeking behaviour in relation to malaria, in Africa. The study points toward individual or community knowledge, beliefs, perceptions and attitudes or motivation in relation the recommended malaria control approaches. The vast reports available so far have prompted some biomedical science thinkers to view studies of the latter nature as no longer needed as they seem to have no significant value to add to the already established knowledge for policy and programme use. This article aims to contribute to the debate that should lead to a change in this perception and draw the attention of policy makers, programme officers, biomedical researchers, governments and development partners.

Keywords: Malaria, pregnancy, antimalarial drugs, antenatal care, Tanzania

Introduction

Malaria is a protozoan disease, transmitted by female anopheline mosquitoes that inject parasites called *Plasmodium falciparum* (abbreviated as *P.falciparum*) when they bite people. However, transmission from one person to another person happens following a blood transfusion process should a person receive infected blood (Scofield & Grau, 2005; Etyang et al., 2016). Sub-Sahara Africa (SSA) is the major home of mosquitoes carrying the *P.falciparum*, the dominant species (Ito et al., 2002). Over 90% of all malaria cases and deaths recorded globally each year occur in this region (Yimam et al., 2021). In 2020 alone, 241 million malaria cases were recorded globally; of these victims, 627,000 died of malaria. In addition, about 90% were reported from Africa (Jagannathan & Kakuru, 2022). In 2021, an estimated 247 million cases of malaria were recorded globally, of which 234 million (95%) were reported from the SSA region (WHO, 2021). Among the latter cases, 619 died of the disease, 80% of which were children under five years of age (*underfives*) (WHO, 2023). The epidemiological trend has remained that way for years, with virtually 90% of all cases and deaths being recorded in the latter region (Pierre-Louis et al., 2014).

The negative health outcomes and the socio-economic consequences of malaria have spillover effects. The global economy has in one way or another continued to be affected by malaria prevalence, morbidities, deaths and their associated productivity losses. Not only the economic well being of individual patients is negatively affected, but also families lose when there is someone suffering in the family, requiring time to take care of him or her. The worst scenario is when the breadwinner is incapacitated. Additionally, the health sectors of the

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malaria endemic countries have continued to spend huge budgets to contain the disease. This is why prioritizing prevention of malaria infection, health and socioeconomic consequences has become an urgent global agenda of the United Nations.

Besides such efforts, the number of people, of all ages who continue to suffer and die of malaria is still alarmingly high in all SSA countries. Living in high poverty conditions, being a child under the age of five years – ‘an *underfive*’ or pregnant woman are higher risk factors compared to other groups in the society. In 2020, for example, data gathered from 33 countries in Africa showed that of 33.8 million pregnancies, 11.6 million (34%) were exposed to malaria infection, with a little higher rates in West Africa (39.8%), Central Africa (39.4%) and 22% in east and southern Africa (WHO, 2021). While the efforts to prevent malaria using products discovered by biomedical research scientists continue to be acknowledged deservedly, there is an growing flaw in thinking that such studies in relation to malaria are no longer as important today as they were before. For this reason, such studies should receive attention for funding support.

This article seeks to justify why studies focusing on knowledge, perceptions, beliefs and attitudes issues in relation to malaria chemoprevention in pregnancy should receive support in Africa and to address issues of policy and programmes that give more attention to social research on medical issues relating to malaria prevention in pregnant women in Tanzania.

Literature Review

Prioritizing the prevention of malaria in pregnancy (MiP) is scientifically justified in that, during pregnancy, women’s cellular immunity against *P.falciparum* malaria, especially in the placenta region, decreases significantly. The main clinical outcomes faced by women who contract MiP include maternal hypoglycemia, maternal anaemia, inter-uterine growth retardation, foetal anaemia, low birth weight (LBW), preterm birth, stillbirth, and congenital malaria (Mutabingwa et al., 1993; Moya-Alvarez et al., 2014). Complications such as maternal cerebral malaria and maternal hypertensive disorders (e.g. gestational preeclampsia) especially in young primigravid, sometimes occur and eventually result into long-term sequels to the survivors (Sibai et al., 1986; Park et al., 2020). The babies born with a LBW due to their mothers having been infected with the parasites can be hypertensive when they get older (Wang et al., 2008; Davis et al., 2012). In general, babies in their infancy age are highly susceptible to the consequences of congenital malaria than the rest children under five years.

The World Health Organization (WHO) recommends two main strategies to be employed for the prevention of MiP. These include sleeping under insecticide-treated nets (ITNs), and every eligible woman to take the recommended drug as a chemoprevention during pregnancy. According to WHO’s definition, preventive chemotherapy means the use of medicines, either alone or in combination, to prevent malaria infections and their consequences (WHO, 2016). So far, the drug recommended for MiP through the latter strategy/method is *sulfadoxine-pyrimethamine*’ (SP).

Reaching all eligible pregnant women with the latter ‘malaria IPTp-SP’ strategy is a well-meant goal (RBM-WHO, 2015; WHO, 2023) although too ambitious due to the continually experienced numerous and multifaceted barriers. Some of these barriers are healthcare system related (Menendez et al., 2015; Alonso, 2021); others, and the majority, are of social, cultural and economic nature (Pell et al., 2011; Hill et al., 2013; Thiam et al., 2013). The established

IPTp policy and guidelines have also been found to be inadequately understood and sub-optimally translated into action by the frontline HCWs. Again, some women do not attend clinic in time. Another barrier is the presence of social perceptions about pregnancy, risk of MiP, and use of antimalarial drugs such as SP during pregnancy, with a drug safety concern (Thiam et al., 2013; Pell et al., 2011; Aberese-Ako et al., 2021).

Problem Statement

Any decision or attempt to end support to studies aimed at examining the role of individual or community knowledge, perceptions, beliefs, and attitudes as well as the behaviours developed in response to or in adaptation to either or several of these elements should be avoided at any cost. Nieto and colleagues (1999) had the following opinion on research and involvement of the community: *“Research projects for malaria control must involve communities to elicit strategies to be successful and programmes to be sustainable. Therefore, knowledge, beliefs and practices of the population concerned must be taken into account in the design of interventions against malaria transmission”* (p.1).

Conceptual and Theoretical Frameworks

According to Mwenesi (1995), disvaluing the non-biological factors on the generation, survival, transmission and progression of pathogens causing malaria is to get prepared for a policy and programme failure in advance. This view is shared by other experts in the field, for example Acharya and Clerand (2000), Heggenhougen et al. (2003), and Singh et al. (2014). It is difficult sometimes to draw a line separating between knowledge and perception even if this view was criticised by experimental psychologists in that, perception does not necessarily influence behaviour, but the other way round (Enns, 2001; Witt, 2011).

Berliner et al. (2020) refer to work done by other scholars/experts in the fields of social anthropology and social psychology whose theories lay out a foundation stone for those interested in conducting knowledge related studies for policy, programme and/or academic reasons. The latter authors discuss the contradictions or controversies in terms of knowledge, thoughts, beliefs, perceptions, opinions, outlooks, feelings and behaviours. According to them, these elements constitute the fundamental aspects of human life.

Oeberst and colleagues (2016) provide another account on definitions of knowledge and their relevance for field applications. These authors find developments in the conceptualization of the ‘knowledge’ issue, seeing it as continuing to grow as time passes, and involving different disciplinary approaches. Each approach has merits/strengths and weakness/shortcomings. On the one hand, philosophers tend to view ‘*knowledge*’ as a ‘*justified true belief*’, a view criticised for seeming to lean mainly on considering knowledge in terms of semantic memory. Since every person has a brain that has a cognitive capacity likely to be unique, arriving at a simple, single and common conclusion on what knowledge should be whereby all the individuals’ perspective converge is highly tricky and remains critical in most situations or contexts. There are both social elements and the non-social (e.g. biological) elements. People continue to learn by seeing or experiencing observable events or features, reading or hearing from others, and doing or practicing things. Therefore, as we continue to live, we as a people do come to get different lessons, some positive or desired; others negative or undesired.

Thus, a person or a group of people deserves to be labelled ‘*ill-thinkers*’ by holding the claim that what is currently known is enough and therefore there is no need to hear or listen, see or know any more about a given thing or issue. Declaring a knowledge endpoint is to declare

acceptance of preventable ignorance, failure and regret that are likely to happen in future. Therefore, there is no need to avoid learning about, or learning from what we think we already know.

Theory guided experimental studies in the field of psychology have depicted that a person's response to a call for action on a particular health thing or issue may depend partly on how he or she perceives or believes in it and what other persons in the society do perceive or believe about it (Kraus, 1995; LaPiere, 2010; Van Dessel et al., 2019). Researchers in the area of health promotion, for example, have noted this from their investigations, confirming the role of individuals' knowledge, perceptions, beliefs, and attitudes in relation to certain health or social phenomena on influencing their actual participation in the proposed problem-solving strategy (Lim et al., 2021). The theory of planned behavior, technology acceptance model, norm activation model (Fischer, 2017), and health belief model (Janz & Becker, 1984; Jones et al., 2015) have been useful in demonstrating the role of knowledge and its confounding elements on individuals' responses to health calls in terms of their acceptance or rejection of the calls. One of the following models –Health Belief Model (HBM), Protection Motivation Model (PMM), Common Sense Model (CSM), Trans-theoretical Model (TTM), among others do each demonstrate how an individual's perceived susceptibility to exposure to certain health risks or a disease-related illness and the consequences arising from it on one hand, and the ability to cope with the situation if exposed by taking the proposed measure against it, do influence that individual's ultimate decision to behave in a certain way by responding positively or negatively to the call made to him or her (Anuar et al., 2020). All these models are useful if tested by researchers aiming at obtaining empirical or systematic evidences on why individual healthcare clients perceive or believe about a health product or policy being promoted. The present article presents some research findings and discusses them in line with these conceptual and theoretical facts from a malaria in pregnancy chemoprevention strategy's acceptability and practicability dimensions.

Methodology

This article presents facts and discusses them based on a combination of primary and secondary research data and different scholars' viewpoints and recommendations. So far, several systematic reviews and meta-analyses have been done, with comprehensive information on the topic of malaria chemoprevention in pregnancy issues in SSA. The reviews or meta-analyses came from research studies done in Tanzania, the methodological approaches employed in such studies having been documented elsewhere (Mubyazi et al., 2005; Mubyazi et al., 2008a; Mubyazi et al., 2010; Mubyazi et al., 2012; Mubyazi & Bloch, 2014; Mubyazi et al., 2014; Mubyazi, 2015). Nevertheless, up-to-date information on the status of knowledge and behavioural related issues in relation to malaria chemoprevention in pregnancy has come from search over the internet.

Findings and Discussions

Controversial views about the recommended malaria chemoprevention in pregnancy

Mubyazi et al. (2005) inferred that a sub-optimal information packaging or information sharing status contributed to low levels of the acceptability, deliverability and actual uptake rates of the recommended IPTp-SP doses in Tanzania and possibly elsewhere in SSA. His findings were confirmed by evidence from surveys carried out across a number of countries in the SSA where other researchers had a similar view for research and policy purposes (Hill & Kazembe, 2006). Subsequent research studies, systematic reviews and meta-analyses came

to illuminate the same observation (Mubyazi et al., 2008b; Pell et al., 2011; Hill et al., 2013; Thiam et al., 2013; Kalu et al., 2022).

In line with the themes organized for results presentation and accompanied discussions, Box 1 lists down the key areas in which questions or concerns were expressed by the participants in studies done so far across SSA, based on cross-sectional and longitudinal studies as well as the meta-analyses and systematic reviews conducted based on such studies.

Box 1. Key areas in which the research participants expressed varied views about malaria IPTp in SSA countries

- Likelihood of malaria in pregnancy leading to regrettable pregnancy health outcomes
- Logic behind or advantages of using SP for the prevention of MiP
- Appropriateness and risks of using SP for preventing and/or for treating MiP
- Standard number of the SP tablets/pills per single dose
- Standard number of doses of SP for malaria IPTp purpose
- Timing of the first dose of SP and the last one for malaria IPTp
- Risks of mixing use of conventional and traditional drugs for treating MiP
- Added value (advantage) of IPTp-SP while still using ITNs and other methods
- Relevance of continuing with SP for malaria IPTp while already SP is facing resistance
- Booking time for ANC services and resultant advantages

The delay or failure to attend ANC/MCH clinics has hindered timely access to information on pregnancy care and in particular on IPTp-SP usage (Diala et al., 2013; Sahu et al., 2020). This justifies what Bruce-Chwatt (1987) remarked earlier, that poor knowledge may exist because of a lack of access to proper health information and in a timely manner.

Likelihood of MiP Leading to Regrettable Pregnancy Health Outcomes

It is important to be aware that there are still many public/community members who do not believe in the scientifically reported dangers or risks of malaria, and particularly, MiP in the SSA countries. These frustrate efforts towards measures recommended for malaria prevention and/or treatment (Heggenhougen et al., 2003; Singh et al., 2014). Understanding the reasons behind the observed mistrust in the reported risks of malaria can help to add insights towards identifying or designing better approaches for changing such people's mindset and their eventual behaviours. It is necessary to continue making efforts of designing and packaging the information that is persuasive enough, targeting the key influential people in the community, to remove the prevailing doubt amongst them about the seriousness of malaria, especially in certain situations such as during pregnancy and early childhood. The existing health education and promotion programmes have to be more innovative in packaging the messages and using message delivery/communication tactics and models that are proactive in nature to convey the right messages to the intended population.

Message Packaging Quality

As posited by the Health Belief Model (HBM), messages will be able to achieve optimal behaviour change if they succeed to target perceived barriers, benefits, self-efficacy, and threats (Jones et al., 2015). One can consider a scenario whereby messages are given by the authorized parties such as communicating institutions and HCWs, but their delivery is found to be insufficient for the recipients (audiences) targeted by them to understand, appreciate the meaning and act accordingly. The messages given may seem or sound ambiguous or insufficient or complicated, for example, by not being specifically guiding on what exactly to

do or when to do what and by whom or how. From Kenya, Okello et al., (2018) report a study done in two counties having found the unclear recording and reporting instructions leading to a lack of standardization in the IPTp data generation. A similar observation was made in Mufindi and Mkuranga districts in Tanzania (Mubyazi and Bloch, 2014), Ghana (Mohamed et al., 2022; Aberese-Ako et al., 2022), Kenya (Okello et al., 2018), and in several other SSA countries (Al Khaja & Sequeira 2021).

Message Delivery Feasibility

Sometimes, the attitude and motivation of the service provider to educate or sensitize the audience is found to be low, not because the respective provider is not informed or knowledgeable of what he or she is supposed to share with the targeted audience. A well-intended health or policy statement carrying a particular health message may not be delivered in a clearly understood form simply because of the weakness or the negligence of its conveyer/communicator. A scenario has, for example, been noted whereby the HCWs find themselves being too occupied with several tasks to perform at the service delivery point to the extent that they forego necessary information to their clients. In Ghana, a study by Mohammed et al. (2022) found that about 57% of the 315 HCWs did not inform pregnant women about the next IPTp dose and visit. Failure to give health education and other basic information in relation to IPTp and other pregnancy care requirements was also found in Mkuranga and Mufindi districts, in Tanzania (Mubyazi and Bloch, 2014, where the overcrowding of patients at the HCF drew the attention of the same HCWs who were responsible for attending pregnant women and lactating mothers at the MCH clinics. Such workers found themselves having no option of not postponing or shortening the health education sessions on certain week days in order to ensure that they cover all the clients for at least a given level of the services they needed. By so doing, they appeared attending the clients in a rushing manner and even seeming to be negligent to some of the clients while they were actually overloaded due to their fewness at the understaffed HCF (Mubyazi et al., 2012).

Additionally, in Africa and most of the rest low-and-middle-income countries (LMICs), a considerable number of public members live in remote settings with limited road and other infrastructural facilities, a condition that limits their access to basic health services delivered at the conventional HCFs located mostly in urban and peri-urban centres (Kwast, 1996). Efforts have continued to be made in the respective countries to take at least some of the services to remote settings through mobile/outreach clinic programmes. For health information delivery, a supplementary approach could be to reach people residing in such settings by means of mobile phones since the radio alone cannot suffice the need. Pregnant women and lactating mothers could receive some educational and reminder messages through an established tele-healthcare system. This approach has been tried out, with a demonstrable achievement in improving the ANC attendances and coverage of pregnant women receiving more doses of IPTp in areas where it has been tested e.g. South Africa (Quan et al., 2014) and Burkina Faso (Ouédraogo et al., 2022).

Message Delivery Deliberately Undermined by Communication Channels

The client's/patient's charter explicitly states the right patients deserve to access correct information about the services given in the protection of their health (Creel et al., 1996; Price et al., 2014). The outstanding question has been the type of information that should be disclosed by practitioners or doctors to patients, especially on sensitive issues (Faden et al., 1981). The advantage of giving information on medication safety and pharmacovigilance

issues to patients, for example, has the advantage of making them feel actively involved in the therapy recommended and widening the chance for their compliance with the treatment guidelines (Jose & AlHajri, 2018).

Message Delivered Unaccepted or Untrusted by Target Recipients and Users

Sometimes the message gets well conveyed as the guidelines direct, but recipients are not ready to take it, either at all or in the same way it was delivered, for reason known to themselves. For instance, from a study done with the aim of finding out the factors influencing the anticipated acceptability of a community-based approach to the delivery of IPTp-SP through community health workers (CHWs) in four sub-Saharan African countries, one of the factors found to underpin communities' trust in latter IPTp-SP delivery approach was 'perceived competence' of such workers (Enguita-Fernández et al., 2021). Similarly, Mubyazi (2015) reports from a study done in Mkuranga and Mufindi districts, Tanzania, whereby pregnant women and lactating mothers were concerned about the inability of the HCWs serving ANC clients to deliver the health educational messages in appropriate ways.

Risks of Using SP for Preventing or for Treating MiP

There is so far consistent reporting of the malaria IPTp-SP strategy being partly undermined by the prevailing myths and misconceptions about SP's safety in all communities surveyed in throughout SSA (Pell et al., 2011; Hills et al., 2013; Thiam et al., 2013; Aberese-Ako et al., 2021). This reflects a gap in health education and sensitization on MiP and its prevention and treatment approaches. MiP is partly perceived by some of the community members as not being highly risky as scientists and health authorities proclaim. Likewise, there is a group of HCWs who are also not happy seeing SP remaining approved for MiP prevention because of not trusting in its safety and/or its treatment ability. Studies done in Uganda (Mbonye et al., 2006), Tanzania (Mubyazi et al., 2013), Malawi (Almond et al., 2016), Mali (Doumbia et al., 2021), and in several other SSA countries (Hill & Kazembe, 2006; Faye & Lugand, 2021) verify. Exposure to a spreading information about the scientifically evidenced SP resistance (Rogerson and Unger, 2017; Alonso, 2021) may be one of the contributing reasons for a lowering trust in SP's treatment potential (Al Khaja & Sequeira, 2021; Plowe, 2022).

Further in Mubyazi's Mkuranga and Mufindi districts study case in Tanzania (Mubyazi, 2010), incidences of the HCWs attending pregnant women hesitating to disclose some information including the possible, albeit rare and mild SP's side-effects were noted. The hesitant HCWs claimed to do so in fear of the sceptical clients who after hearing about that could opt to refrain from taking the pills given for IPTp, if allowed to take the pills at home, or by pretending to have faced allergy after using the pills offered at the clinic before (Mubyazi & Bloch, 2014). Elizeus Kahigwa's survey, in Tanzania also, noted the same picture (WHO-Country Office, Tanzania, 2005). A similar attitude overruling the focused ANC guideline's recommendation of adhering to the DOT algorithm has been reported from the studies done in other SSA countries such as Nigeria (Onoka et al., 2012), Kenya (Okello et al., 2018), and Ghana (Aberese-Ako et al., 2021; Mohammed et al., 2022), to mention a few.

The existing mass media (Yaya et al., 2021; Umeano-Enemuoh et al., 2015) and social media (Hale, 2021) are part of the sources or channels through which good news and the bad ones spread out quickly. A few cited survey reports depict a need for finding out alternative or more innovative approaches for convincing stakeholders concerned to continue trusting in SP for malaria IPTp becomes obvious. It does not suffice to inform the policy and programme

authorities of the contemporary or the trending situation of public doubts about SP usefulness during in pregnancy. From common sense viewpoint, people are likely to think twice or move some steps back asking themselves what will happen if they consume a given drug, especially if there are reports about its actual or its possible side-effects or treatment failure. This is not a bad thing. What the authorities need to be aware of is that, any reported badness about a conventional drug leads to fears about the health outcomes of its users. Such a fear tends to spread out quickly in the community, leading to a certain degree of confidence in the drug, and to a number of community members avoiding or stopping to use it. To demystify the unscientifically grounded allegations or retrieving the information wrongly spread out from people's minds is not easy.

Lay people, also interact with the trusted HCWs such as physicians, nurses, pharmacists and allied workers. During their interactions, they share news or information. Imagine someone meeting a HCW expressing a concern about a given drug, if the person is lay in the medical or a medical-allied field, obviously he or she will develop a trust in that HCW. The same applies if someone meets with a trusted colleague, friend, a co-worker, a schoolmate, a leader, or a neighbour reporting negatively about a given type of medicine or a medical practice and by virtue of the position, training background, experience, or other merits, trust in him or her to have the right information on what is being said is likely. The challenge come if the trusted person is also uninformed (Mwendera et al., 2017; Faye and Lugand, 2021; Aberese-Ako et al., 2021; Abesere-Ako et al., 2021; Mohammed et al., 2022). On the other hand, one can agree with me that, literate people with a custom of reading scholarly health related textbooks, journal articles, magazines, and other documented materials such as reliable newspapers get excited or alerted if they read about sensitive and alarming health matters including those relating to drug use for a disease prevention or treatment. They may use the reports in either ways, positively or negatively, depending on how they value and perceive the contents presented therein. Therefore, any misuse of a proper information or use of an improper one results into certain misinterpretations that have a negative bearing on the translation of such an information into a good practice. It becomes an advantage if the information shared is real and positive. This can be impressing, to contribute to the acceptability of the intervention or a strategy being promoted (Aberese-Ako et al., 2021). Otherwise, the wrong and negative one misleads the parties receiving it, either directly from the sources or indirectly through other people in the community (Nieto et al., 1999; Mubyazi et al., 2005; Chen et al., 2007).

Standard Number of the SP Tablets/Pills Per a Single Dose

In a Tanzanian case study done in Mkuranga and Mufindi districts reported to find some of the HCWs especially those working at dispensary level ANC clinics asking the interviewers to comment about the actual dose appropriate for the pregnant women found to have very low body weights (*this being unpublished a prior*) as well as those claiming to be allergic with SP or to have taken SP shortly before attending clinic (Mubyazi & Bloch, 2014). The inquisitive HCW believed in the three tablets dose likely to overdose the clients described in either of the latter two scenarios (Mubyazi, 2010).

Standard Number of Doses of SP for Malaria IPTp purpose

A study done earlier in 37 SSA countries found 31 (84%) having guidelines recommending 2 standard doses of IPTp-SP before the WHO has recommended with emphasis a standard of 3 or more doses (WHO, 2016). Among the clinical epidemiologists involved in such studies and the subsequent debates, questions have been raised regarding the added benefit of administering three or more doses of SP for IPTp (WHO, 2013), and of continuing with SP

for IPTp instead of other potential drugs (Augusto et al., 2020). The conclusion remained to be that SP is still a safe, efficacious and effective drug for malaria IPTp and three or more doses are advantageous over only two doses. However, the trending SP resistance growth and the potentials demonstrated by drugs that could act as alternative to SP raise another concern (Kayentao et al., 2015).

Meanwhile, the limited or improper translation of the IPTp-SP policy guideline at the grassroots (e.g. HCF) level has continued to be documented from different SSA countries. Researchers report a number of HCWs interpreting the guideline specifying administration of ‘at least two doses’ of SP for malaria IPTp to each eligible pregnant woman attending ANC clinic, initially stated so by in the WHO Guideline for ANC (WHO, 2012) and then adopted by the nations in their ANC guidelines as meaning strictly two doses. Mubyazi et al. (2012) report a study done in two districts, Tanzania, that found HCWs administering 3 IPTp-SP doses while others stuck to delivering only 2 doses and this different practice having rooted anchored in such providers’ different interpretations of the existing national guideline and their different exposures to IPTp-SP administration directives. In Malawi (Mwendera et al., 2017) and other SSA countries (Abereso-Ako et al., 2021) a similar gap in IPTp-SP administration knowledge (including the DOT adherence requirement and the timing of the stating dose and the subsequent ones) was found. This is why the WHO came out (WHO 2012; WHO, 2013) and continues to come out with to clarifications and updates on the requirements (WHO, 2022).

Timing of the First Dose of SP and The Last One for Malaria IPTp

Meanwhile, the inabilities of some frontline HCWs to administer IPTp-SP has continued to be reported from virtually in all the countries in which the studies were done with a focus on, among other things, the capacity of the frontline service providers (HCWs) to adhere to the IPTp-SP guideline’s recommendations, including the DOT algorithm, the timing of the doses, and eligibility of pregnant women based on gestational ages and other health requirements. The non-compliance in either of these has been found, and being partly due to such service providers not having a sufficient information on what to do and how. The guideline has either been confusing in that they seem(ed) ambiguous in terms of their statements’ phrasing and the content of the messages lacking specifying directives, as noted from Ghana (Aberese-Ako et al., 2021; Mohammed et al., 2022), Kenya (Okello et al., 2018; Hill et al., 2013), Tanzania (Mubyazi et al., 2008a), Mali (Doumbia et al., 2021), Malawi (Mwendera et al., 2017), and several other SSA countries (Hill & Kazembe, 2006; Thiam et al., 2013; Al Khaja & Sequeira, 2021).

Risks of Mixing Use of Conventional and Traditional Drugs for Treating MiP

It is common in Africa for people of all traditional categories to practice self-medication for malaria, this being one considered as one of the drug-resistance contributing factors (Almond et al., 2016). What was found to be missing as of today is the research evidence on what happens or has happened to the people (amongst whom are pregnant women) who have been using or those continuing to use the traditional medicines/drugs they are accustomed to use, and doing so concurrently with the prescribed or the self-procured conventional ones.

Added Value (Advantage) of IPTp-SP while still using ITNs and Other Methods

In the Mkuranga and Mufindi districts case study, Mubyazi (2010) found out the HCWs serving in the ANC clinics wanting to know themselves, after meeting questions from their

clients who also wanted a justification about, the reason for SP to be recommended for malaria IPTp while for a long time the authorities emphasized on health education and sensitization to continue in pursuit of encouraging the people to sleep under ITNs and doing so consistently. Such workers testified also meeting the clients questioning about IPTp-SP under DOT system since there have been a warning against anyone using drugs prescribed at unreliable sources or those procured from retail vendors for self-medication purposes without one having undergone a blood-based test to confirm a malaria diagnosis. Data collectors in this study noted the same questions from some of the study participants, especially during the village based FGDs with pregnant women and mothers of small children. Thus, to such individuals and their HCWs who shared the same concern, IPTp-SP seemed contravening the latter warning.

Booking Time for ANC Services and Resultant Advantages

The extant literature reports mixed evidence in Africa on the association between the timing of the first ANC visit and the number of IPTp-SP doses taken/administered to the respective ANC clients. In some studies, an association was noted to exist while in other studies it was not. However, the observed variations in the evidence was contributed by the design of the study in terms of place, duration, and population coverage based on particular inclusion and exclusion criteria as well as the nature of the analyses performed under each study whereby the interactive effects of modifier or confounding variables such as socio-demographic characteristics relating to respondents/participants' parities, ages, marital status, wealth, education, etc. have not been uniformly examined (Nkoka et al., 2021). Nevertheless, both the original studies and the meta-analyses performed based on data gathered from such studies generally confirm late booking tendency and irregular (inconsistent) ANC visits as one of the key barriers to the uptake of the first dose and the rest of the doses of IPTp-SP as recommended (Kanyangarara et al., 2017; Nkoka et al., 2021; Jinga et al., 2019). Social-cultural values such as norms, beliefs and traditions hindering pregnant women to act timely (Pell et al., 2011; Finlayson & Downe, 2013; White et al., 2013) and factors relating to how the quality of ANC is perceived (Thiam et al., 2013; Tuncalp et al., 2015) are reported to contribute. This picture implies how education on the sensitiveness of pregnancy care is still low and the need reconsidering or evaluating the degree to which the messages communicated to educate and sensitize the public especially women and their family supporters are packaged and actually delivered. There is a need also to find out the educational and sensitization approaches employed, whether the messages concerned are delivered in easy to understand language, passed over to the targeted audiences by the conveyors with the capacity and a motivation to do so, delivered in the right time in terms of convenience of the audiences targeted to receive them.

Conclusions and Recommendations

As observed earlier (Acharya & Clerand, 2000), maternal and child health interventions do not succeed to the levels and manners envisioned partly due to their design and institutionalization being based on the evidence from studies looking at the efficacy and clinical outcomes of a given intervention, with little or no emphasis on studies looking at the knowledge and skills of service providers as well as the knowledge, beliefs, perceptions, attitudes and health seeking behaviours of the population targeted to respond positively to the intervention being promoted. For some reason(s), there are yet biomedical sciences-oriented researchers, scholars, policy-makers and programme officers considering studies that focus on the latter knowledge and its confounding elements in relation to malaria as being less

important for the time being (Mwenesi 1995; Lees et al., 2023) and not rationalizing a need for policy and programme support including funding. This is a flawed and counterproductive view. Such stakeholders have to be first of all aware that, knowledge is a time bound condition, changing as time goes, varies according to conditions or events, varies in degrees or levels in both the individual concerned and between or among individuals. They also have to appreciate that, having knowledge is one thing, but translating it into action in a way expected by everyone is another thing partly because of what a person perceives, experiences, and hears from others. Therefore, to recommend a stopping of the support to social studies looking at the aforementioned aspects in the midst of the emphasis on strengthening the promotion of malaria interventions is likely to lead to regret in future. The so far extant systematic evidence reveals how doubt about use of SP for MiP prevention and cure exists not only in people categorized as ‘lay in the field’, but even among the service providers (HCWs) and their managers (Mubyazi et al., 2012; Mwendera et al., 2017; Al Khaja & Sequeira, 2021; Mohammed et al., 2022). Through undertaking studies focusing on the aforementioned components/elements, important feedback can be obtained to inform and guide authorities involved in policy creation or review and those responsible for design of the policy implementation guidelines and policy implementation strategies (Mwendera et al., 2017; Faye & Lugand, 2021). Moreover, the techniques used for inviting the key stakeholders to express themselves in light of the questions posed and to give their opinions can take it as a chance for airing their voices that can be heard at higher levels, making the opinion givers concerned to develop a feeling of being respected and valued to have a role to play in policy creation and planning interventions aimed for disease control.

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Male Involvement in Antenatal Care: Does Socio-demographic and Background Characteristics Matter in Zimbabwe?

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Abstract

Globally, male presence in Antenatal care (ANC) and delivery remains an obstacle challenge to safe motherhood. Male involvement in maternal and child health care can help lower maternal morbidity and mortality. This study sought to determine the prevalence of male involvement in ANC and assess factors influencing male partners' involvement in ANC visits in Zimbabwe. The study used secondary data extracted from the 2015 Zimbabwe Demographic and Health Survey. A sample of 2072 men were selected from the men's file who reported to have had a child in two years preceding the Survey. Univariate and bivariate (chi-square test) analysis of independence was employed to show the relationship between male involvement and background variables. The findings showed that the prevalence of male involvement in ANC was high (92%). Male involvement was high among those with secondary education (58%). ($P < 0.02$). Males who resided in rural areas (57%) were involved in ANC more than their urban counterparts ($P < 0.05$). The findings showed that husbands with more than three children were more involved in ANC than those with less than three children. Lastly, men from the higher wealth quintile (45%) participated more in ANC compared to those from the middle quintile. Partners who belonged to the Apostolic Sect (29%) ($P < 0.000$) participated more than other religions. In as much as the prevalence of male involvement in antenatal care was significantly higher, it is recommended that men's involvement in ANC should be a continuous process from the first trimester to childbirth as well as throughout post postpartum period.

Keywords: Male involvement, antenatal Care, Zimbabwe.

Introduction

Antenatal care (ANC) is one of the pillars of safe maternal health and an important factor for safe child delivery globally. It significantly reduces maternal and perinatal mortality by detecting early labour and complications during childbirth (WHO, 2018). ANC refers to the care that pregnant women receive in primary healthcare facilities with the overall goal of ensuring the good health of both the mother and fetus (Berhan & Berhan, 2014). WHO recommends a minimum of four visits as part of the global agenda (WHO, 2018). Most developing countries in Asia and Sub-Sahara Africa including Zimbabwe use the four-visit model of Focused Antenatal Care (FANC) for women with fewer complications and living in low-income regions as recommended by the WHO (Ali et al., 2020). The four visits ensure the realization of SDGs 3.1 and 3.2, aiming at decreasing the maternal mortality ratio to less than 70 per 100 000 live births globally, neonatal mortality to less than 12 per 1000 live births, and under 5 mortality to less than 25 per 1000 live births respectively (Ali et al., 2020).

Male involvement in ANC remained a critical issue over the years. Male involvement in maternal and child health entails fathers and community members being actively involved in caring for pregnant women and supporting families to access better health services (Gopal et al., 2020). Male participation in ANC services is crucial for pregnant women to fully utilize

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and benefit from the services offered in primary healthcare facilities where they can be attended by skilled birth attendants (Kaye et al., 2014). The practice of men accompanying their spouses to ANC visits, especially in low and middle-income countries is positively associated with improved maternal and child health outcomes (Gopal et al., 2020). Previous studies show that male involvement in ANC reduces the likelihood of women delaying in decision to use ANC health services (Gibore et al., 2019), and promotes the utilization of maternal health services in Africa, (Wai et al., 2015). However, there is dearth of literature concerning global, regional as well as Zimbabwe's prevalence on male involvement in ANC.

Reproductive health programs focused on women's health and viewed men as role-irrelevant non-actors in reproductive health issues including ANC, before the 1994 International Conference in Cairo (ICPD) (Zureick-Brown et al., 2013). Nevertheless, previous studies point to the effect of the role of men's attitudes, knowledge, and behavior having a significant impact on women's reproductive health decision-making (Bloom et al., 2000). Despite calls for male; participation in maternal care, several studies have shown that the prevalence is still below 60% in most African countries for instance, 54 % in Tanzania (Nansubuga & Ayiga, 2015) 29,8% in Ethiopia (Ayalew & Nigatu, 2018), 26% Kenya, (Aluisio et al., 2016). The lack of male involvement delays maternal health care (Sumankuuro et al., 2019). Data on the global and regional prevalence of ANC utilization among males is missing. The differences observed in these findings might be due to study settings, sample size, and geographic location among others. In Zimbabwe, most studies have focused on women's utilization of ANC services (Musizvingoza & Wekwete, 2011; Tessema et al., 2021) and few studies have been done to explore male involvement in ANC. The ANC utilization prevalence rate in Zimbabwe is 76%, (ZIMSTAT & ICF, 2016), which is lower than the 79% reported in the Southern region of Africa (Tessema et al., 2021), and the 85% global utilization rate (Dansereau et al., 2016). Socio-demographic determinants are correlated with men's involvement in ANC. Previous studies found men's level of education to be highly associated with ANC involvement (Ongeso & Okoth, 2018). In addition, husbands who live in urban areas are more likely to be involved in ANC visits than their rural counterparts (Laksono et al., 2022).

The Maternal Mortality Rate (MMR) per 100 000 live births in Zimbabwe has significantly dropped from 651deaths (ZIMSTAT & ICF, 2016) , to 462 deaths and then to 363 deaths (Murewanhema et al., 2020). Although it is significant, Zimbabwe has previously failed to achieve the Millennium Development Goal (MDG) that aspires to improve maternal health and reduce maternal mortality by 75% between 2000 and 2015 ((United Nations, 2015). It is questionable whether Zimbabwe would achieve the global target set to reduce the global maternal mortality ratio to less than 70 per 100 000 live births by 2030. Men's involvement in ANC is likely to significantly encourage their partners to utilize antenatal care services. Therefore, the study aimed to examining the level of male's participation in ANC services and the associated factors in Zimbabwe.

Methods

Study Design

The study used data drawn from the 2015 Zimbabwe Demographic Health Survey, after seeking permission from the ICF website. The 2012 Zimbabwe Population Census data was used as the sampling frame for the 2015 ZDHS. The sample drawn was a national representative and covered household-level socio-demographic characteristics, health, and sexual activity, maternal and child health, gender-based violence, mortality, fertility, family planning as well as the nutritional status of the respondents. According to the administrative

structure of Zimbabwe, each province is divided into districts, and districts into wards. Each ward was subdivided into census enumeration areas (EAs) during the 2012 Zimbabwe Population Census. The 2015 ZDHS sample was selected with a stratified, two-stage cluster design, with EAs as the sampling units for the first stage. The second stage of sampling included the listing exercises for all households in the survey sample. A complete listing of households was conducted for each of the 400 selected EAs in March 2015. A representative sample of 11,196 households were selected and men aged 15-54 years were selected for the interviews. In the present study, a total of 2072 men, who reported to have had a child in the two years preceding the survey were selected from the 8 396 men aged 15-54 years sampled for the 2015 ZDHS.

Outcome Variable

The dependent variable was created based on the responder's ANC involvement status. The dependent variable in this study was male involvement in ANC which was assessed using a closed-ended question. The related survey question was "Were you ever present during any ANC check-ups? For analysis purposes a binary outcome was created with present equal to one and not present equal to two.

Covariates

The study considered socio-economic variables, demographic and environmental determinants of male involvement in antenatal care. Socioeconomic variables included level of education, religion, and wealth status. Demographic variables included age, parity, and marital status. Lastly, environmental variables encompass place of residence. Age was measured as a nominal-level variable as follows: 15-24, 25-34, 35-44, and 45-54 years old. Marital status is a categorical variable that was measured as those in unions and not in unions. Education was measured as no education, primary, secondary, and higher. Wealth status was also measured as poor, middle, and rich. Religion is regarded as a nominal variable, which was divided into nine groups which are: Traditionalist, Roman Catholic, Protestant, Pentecostal, Apostolic Sect, Other Christians, Muslims, None, and others. For the easy study, these groups were transformed into four which are Traditional, Main Line Churches, Pentecostal, and Apostolic Sector. The place of residence was categorized into rural and urban. Lastly, in this study parity was categorized as 1- 2 children and 3+ children.

Statistical Analysis

Data were statistically analyzed using SPSS version 21. Data were weighted to account for the effect of sampling imbalances, complex survey design, and non-response. Frequency distributions were computed to describe and summarize the characteristics of men considered in the sample. The relationship between the dependent variable as to whether the male respondent was present or not present and the independent variables was established at the bivariate level and tested using the chi-square test, set at $p < 0.05$. The univariate analysis involved examining the distribution of mainly the study sample characteristics such as age, religion, place of residence, education, wealth status, marital status, and parity as well as the prevalence of male involvement in ANC. The results were presented in the form of a frequency distribution table. The bivariate relationship between the background characteristics and male involvement in ANC was examined using the Chi-square test of independence. It was interpreted as a measure of the relative (strength) association between two variables, in this case, the background variable and the dependent variable.

Results

Table 1 presents the frequency distribution of background characteristics of males aged 15-54 years in Zimbabwe. The majority of males were involved in ANC during the time their partners were pregnant (96%). The majority of the respondents were found to be between 25-34 years (48%). About 33% of the respondents reported that they were aged 34- 44, 11% were aged 15-24, and 9% were aged 44-54 years.

Table 1: Distribution of Respondents by Sociodemographic Characteristics

Characteristics	Frequency	Percentage
Age		
15-24	222	10.7
25-34	988	47.7
34-44	681	32.9
45-54	181	8.7
Education Level		
No education	19	0.9
Primary	489	23.6
Secondary	1312	63.3
Higher	252	12.2
Marital Status		
Not in union	111	5.4
In union	1961	94.6
Type of Place of Residence		
Urban	774	37.4
Rural	1298	62.6
Wealth Quintile		
Poor	755	36.4
Middle	338	16.3
Rich	979	47.2
Religion		
Traditional	522	25.1
Main Line Churches	410	19.8
Pentecostal	440	21.2
Apostolic Sect	720	33.9
Parity		
1-2 Children	955	46.1
3+ children	1117	53.9
Male Involvement in ANC		
Yes	1901	92.0
No	171	8.0
Total	2072	100

Source: ZIMSTAT & ICF, 2016

The majority of the respondents, 63%, had attained secondary education. About 12% of the respondents reported that they had higher education (tertiary). Only 24% of the respondents reported having primary education. A significant proportion of the respondents 95%, reported that they were in union and 5% of the male were not in union. The majority of the respondents (63%) were from rural areas. Concerning wealth status, 47% of the respondents reported that they belonged to the rich wealth quantile. A sizeable proportion of the respondents 36% reported that they were poor and about 16% of the population reported that they belonged to the middle wealth quantile. More than a third (34%) of the respondents belonged to the Apostolic Sect and an equal number (21 %) belonged to mainline churches and Pentecostals. A larger proportion of the population (54%), reported that they had 3+ children and 46% reported that they had 1-2 children.

Bivariate Analysis: Background Characteristics by Male Involvement in ANC

Table 2 shows the bivariate relationship between the background variables and the male involvement in ANC. The analysis revealed that education level, type of residence, wealth quintile, religion, and parity were associated with male involvement in ANC. Again the study revealed that there was a significant association between education and male involvement in ANC. A higher percentage of respondents who had attained secondary education were more involved in ANC with 58%, compared to those who had accomplished only primary and higher education (21% and 12%, respectively), ($p < 0.002$). Concerning place of residence, a higher proportion of respondents were obtained from rural areas (57%) compared to their urban counterparts (35%). The analysis showed that the place of residence is significant ($p < 0.005$). A statistically significant association was observed between the wealth quintile and male involvement in ANC. Those respondents who belonged to the rich quintile reported having the highest involvement in ANC (45%) than those who belonged to the poor and middle quintile groups 33% and 15%, respectively), ($p < 0.000$). The prevalence of male involvement in ANC varied by religious affiliation, for instance, men who belong to the Apostolic sect had the highest involvement (29%) compared to other religions ($p < 0.000$). Lastly, the results showed that men with three or more children (49%) were involved in ANC more than men with 1-2 children (43%). ($p < 0.002$).

Discussion

The study aimed at addressing two objectives: the prevalence of male involvement in ANC and the socio-demographic factors associated with male involvement in ANC. The study found that the prevalence of male involvement in antenatal care in Zimbabwe was 92%. This implies that men had a high level of involvement in the ANC in Zimbabwe. These findings show a higher ANC prevalence of male involvement compared to 42.2% in Indonesia, (Guspiano et al., 2022), 39.2% in the Pwani Region of Tanzania (August et al., 2016), and 53.9% in Central Tanzania (Gibore et al., 2019). The first reason for a high prevalence rate of male involvement could be attributed to the question used in the ZDHS. The question was ‘Were you ever present during any ANC check-ups?’, which did not specify the stage at which men were involved in ANC. A minimum of four ANC visits were initially required if the pregnancy did not pose any risk to the woman under the Focused Antenatal Care (FANC) Framework especially in low-income countries with healthcare resources which are strained (McHenga et al., 2019). However, WHO 2016 revised the minimum number of visits to eight to adequately prepare for smooth delivery and avoid complications (Benova et al., 2018). Secondly, the increase of male involvement in ANC could be the deliberate attempt by the Zimbabwean government to involve men in reproductive health issues through PMTCT programs. These interventions place a high premium on HIV testing for pregnant

mothers and their partners to prevent high transmission. Taken together, such initiatives retain male agency and involvement in all processes of ANC.

Table 2: Bivariate Relationship Between Background Characteristics and Male Involvement in ANC

Variable	Present % Yes	Not Present % No	P-value	Total
Age				
15-24	9.7	1.1	0.840	222
25-34	44.1	3.6		988
35-44	30.4	2.5		681
45-54	7.6	1.1		181
Education Level				
No education	0.8	0.1	0.002	19
Primary	21.2	2.4		489
Secondary	57.9	5.5		1312
Higher	11.9	0.3		252
Marital Status				
In union	87.1	7.5	0.380	1961
Not union	4.6	0.7		111
Type of Residence				
Urban	35.1	2.3	0.005	774
Rural	56.7	6.0		1298
Wealth				
Poor	32.6	3.9	0.000	755
Middle	14.6	1.7		338
Rich	44.5	2.7		979
Religion				
Traditional	23.6	1.5	0.000	520
Mainline Churches	19.3	0.5		410
Pentecostal	19.9	1.4		440
Apostolic Sect	29.0	4.9		702
Parity				
1-2 Children	43.2	2.8	0.002	955
3+ children	48.5	5.4		1117

Source: ZIMSTAT & ICF, 2016)

In addition, the study also aimed at examining the socio-demographic and socio-economic factors influencing male involvement in ANC, which were education level, type of residence, wealth quantile, religion, and parity. The study revealed that these factors were associated with male involvement in ANC. The current study showed that educational level was associated with male involvement in ANC. Males with secondary education were more likely to be involved in ANC as compared to men who had primary and higher education. The current study showed high contrary results to Lao PDR, and Pakistan (Laksono et al., 2022; Sumankuuro et al., 2019). The findings showed that men with higher education levels were involved in antenatal care compared to those with primary and secondary. Also, studies done in Ghana and Debre Berham town of Ethiopia found that men with primary and secondary

education were most likely not involved in ANC visits with their partners (Quarcoo & Tarkang, 2019; Shine et al., 2020).

Apart from the above results, the current study revealed that partners who resided in rural areas were more likely to participate in ANC than their urban counterparts. The finding concurs with Kibusi who argued that men who reside in rural areas were more involved in ANC compared to urban men (Gibore et al., 2019). The reasons may be due to the long distances traveled to get to the clinics hence forcing husbands to accompany their expectant wives for antenatal checkups. Another plausible reason could be most urban men had occasional jobs and therefore are less likely to get involved in ANC when their partners are pregnant.

Wealth was another variable and an important economic factor of male involvement in antenatal care according to this study. Males' wealth status determined their involvement in ANC. Wealthier partners were found to be more involved in ANC than the poor and middle-level quintiles. This might be because rich partners prioritize good health outcomes and also have the necessary resources.

This study also found that religion as a variable played a significant role in male involvement in antenatal care, men belonging to the Apostolic Sect were more likely to participate in antenatal care services compared to those who belonged to mainline churches and Pentecostal churches. Studies conducted in Nigeria and Cameroon ascertained that religion influenced male involvement (Ampt et al., 2015; Bamidele et al., 2022). In the Zimbabwean context, high involvement in ANC among males who belong to Apostolic sects could be explained by the government initiative of engaging the Apostolic sect leaders to embrace modern medicines in promoting and educating the members about the importance of ANC. Strict adherence to church beliefs and practices undermines the modern uptake of medication by some Apostolic sect congregants.

The study also indicated that men were more likely to be involved in ANC when the partner had three or more children. However, these results were not similar to other studies. For instance, (Laksono et al., 2022; Shahjahan et al., 2013), revealed that a partner was motivated to participate when his wife had two or fewer children, and husbands participated less in antenatal care when their wives had more births. Another study revealed that parity was not associated with male involvement in ANC (Kumbeni et al., 2019).

Limitations

The dependent variable in this study was male involvement in ANC, which was assessed using a close-ended question. The related survey question was 'Were you ever present during any ANC checkups? The question does not specify when exactly the male accompanied their partner. Timing of antenatal care attendance is crucial for the male to accompany their pregnant partners to the ANC clinic/hospital. This would improve the maternal outcome since the partner is aware of any complications that may arise during the pregnancy. In addition, the Prevention of Parent to Child Transmission (PPTCT) of HIV is easily managed during the first trimester.

Conclusion

The prevalence of male involvement in antenatal care involvement was 92% in Zimbabwe. Education level, type of place and residence, wealth quintile, religion, and parity were significant socio-economic and socio-demographic factors influencing men's participation in ANC services in this study. Involvement is high among men with secondary education, rich

men, those belonging to Apostolic Sect, men with high parity, and also, men residing in rural areas. The study could be showing a major shift in the culture of paternalism which discourages women from making decisions regarding their reproductive rights.

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The Paradox of Curriculum Changes for Ordinary Level Secondary School Students in Tanzania

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Abstract

This paper aimed to assess the effects of curriculum changes in the ordinary level of secondary education. The methods used for the study relied on a qualitative survey research design making use of the interviews. Forty-eight students and eight teachers were involved in the study from two schools in Kinondoni district, Dar es Salaam. Results show that the curriculum change has no relationship with teaching and learning materials in secondary schools. In addition, the findings revealed that good teaching and learning environment is built on positive curriculum changes. The study concluded that teachers should be involved in developing curriculum changes and that the Government should ensure that, there is a strand of the sustainable curriculum in the education sector. Both the Government and the private sector have to train teachers when there are curriculum changes so that they are updated for new knowledge and technology.

Keywords: Curriculum change, students, environment, teachers and learning materials

Introduction

The education system is complex and therefore understanding of its properties motivates scientific inquiry (Bar-Yam, 1997). Tanzania's education system has been changing accordingly to country requirements. As a result of these changes from the colonial period during the German and English times, the curriculum in education was given to a few people who served colonial interests. It had a racial connotation where the Europeans were trained to be administrators, Asians trained to be businessmen while the Africans were trained to be clerks, carpenters, and farmers for the sole aim of perpetuating the status quo (Wandela, 2014).

After independence in 1961, the Parliament of Tanganyika passed the Education Act Number 6 of 1962 in order to regulate the provision of education, which repealed and replaced the 1927 Education Act. It was intended to streamline the curriculum and abolish racial discrimination in the provision of education whereby Kiswahili was promoted to be the National Language and the language of instruction in the primary education curriculum (Mushi, 2009; Wandela, 2014). Despite introducing these changes there were no significant changes in the goals and objectives of education until 1967 when the philosophy of education for self-reliance was introduced by president Nyerere (Wandela, 2014).

Since the curriculum is an essential asset in both educational teaching and learning each state-funded school offer a curriculum that is balanced and broadly based and promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and society. This is done to prepare pupils for the opportunities, responsibilities, and experiences of later life (Alvior, 2014). The school curriculum comprises all learning and other experiences that each school plans for its pupils and students in primary and secondary education (Kelly, 2009).

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This study aimed to assess the effects of curriculum changes in the ordinary level of secondary education. The secondary school curriculum does not meet the learning needs of the students and does not address their career choices. The experience shows that the teachers are hard-pressed to do their heavy work due to frequent changes and lack of facilities for implementing the curriculum project (Projest, 2013). Consequently, teachers are time-barred to prepare lesson plans, schemes of work resulting in students' poor performance in addition to family chores.

Tanzania is made up of different cultural heritages from different local ethnicities where Kiswahili is a major tool used in the cultural linkage to enhance economic development and national unity. The change of the policy to use Kiswahili in primary schools and to have English as the medium of instruction in secondary schools and in the higher learning institutions has an effect on the students' learning ability. The formal curriculum consists of the courses, lessons, and learning activities students participate in, as well as the knowledge and skills educators intentionally teach to students. Invariably, the hidden curriculum consists of the unspoken or implicit academic, social, and cultural messages that are communicated to students and that curriculum has to support the building of social cohesion and foster a national culture to sustain a sense of national identity and belonging (Kelly, 2009; Ahvan et al., 2021). The existence of the curricula changes now and then has an effect on the unwritten, unofficial, and often unintended lessons, values, and perspectives that students learn in the curriculum while they are in school project (Projest, 2013). The hidden curriculum is described as "hidden" because it is usually unacknowledged or unexamined by students, educators, and the wider community.

As argued earlier, soon after her independence in 1961, Tanzania, like many other African countries, adopted a content based curriculum. However, in 2005, Tanzania introduced the change which led to the development of competence based curriculum for learning and assessments in secondary education (Kafyulilo et al., 2013). The review of the curricula was prompted by economic, political, and cultural changes. Accordingly, the old curriculum was ineffective as the graduates failed to demonstrate the skills and competences that fully addressed local, national and global market demands (Komba & Kira, 2013). All these necessitated changes in the curriculum and therefore creating a problem for performance of students in the curriculum.

This paper aims to find out how the implementation of curriculum changes affect Ordinary Level students' performance. The study was guided by the following questions: 1) How do curriculum changes in ordinary level secondary education affect school performance? 2) To what extent does the curriculum changes affect the teaching and learning materials? and 3) What are the difficulties facing teachers and students towards the curriculum change in ordinary level secondary education?

Related Literature

The Association for Supervision and Curriculum Development (ASCD, 2005) clarified that there are components of an effective curriculum development process such as planning, articulating and developing, implementing and evaluating. The evaluation includes organizing curriculum development committees, which consist of teachers who represent the various schools and grade levels of public and students become a driving force of curriculum change. This means that any innovation introduced into the education system including how curriculum implemented requires teachers to become familiar with the new curriculum. Teachers need autonomy to help individual learners reaching proficiency targets (Jacobs,

2010). This enables teachers to focus on those specific parts of the curriculum since teacher extends new curriculum and new materials in their classrooms, teams of teachers could accomplish updating of the new program. This is contrary to Paulo & Tilya (2014) who have established that classroom teaching, learning and assessment in most secondary schools has remained traditional contrary to the competence-based curriculum demands. Lack of comprehensive orientation to the reformed curriculum for the teachers and poorly resourced learning environment are among many drawbacks to the implementation of the reformed curriculum brought out by the curriculum changes. It has also been shown how majority of secondary school teachers are not implementing the revised competence-based curriculum as directed in the formal policy documents such as syllabus and indeed these activities have tended to impact the student (Tarmo & Tilya, 2014).

Curriculum Development in Tanzania

After independence in 1961, the government passed different education Acts to regulate the provision of education. For example, Act of 1962 was intended to abolish racial discrimination in the provision, promote Kiswahili as the national language and media of instruction in primary and English as a subject, and English as a media of instruction in secondary schools (Mushi, 2009). In addition, Kiswahili as the subject, Institute of Adult Education Act No 12, 1975 UPE (Universal Primary Education) and Musoma Revolution in 1974. As it has been noted earlier Colonial Education provided to few individuals that was based on racial discrimination that fulfilled the colonial interests. These Acts led to the reform in school curricula in order to meet national needs, diversification of secondary school classes from form 1 up to 4 (Meena, 2009). In addition, Meena (2009) added that

Primary and secondary education was made terminal and relevant to the needs of the country, empowering the Minister for Education to prohibit the use of certain books in schools. In 1981, the presidential commission of education was appointed to review the existing system of education, proposed necessary changes to be realized by a country towards the year 2000. The commission submitted its report in March 1982, and the government has implemented most of its recommendations. The significance for such recommendations was the introduction of a new curriculum package, in primary, secondary and teacher education levels, expansion of secondary education, the establishment of faculty of education at the University of Dar es salaam (Meena, 2009, p. 188).

Teaching and Learning Materials in the Curriculum towards Performance

Teaching and learning materials are the most important resources needed at the classroom level. If the curriculum is to succeed, the preparation and production of teaching and learning materials must be handled with utmost care. Tomlinson (2012) noted that teaching and learning materials should be informative in the sense that they have to inform learners about targeted knowledge. Additionally, teaching and learning materials should be experiential by enriching learners with the experience of the new knowledge. The Ministry of Education and Vocational Training was responsible for putting into place criteria for evaluating and ensuring that only quality teaching and learning materials were selected to support the teaching and learning in the classroom. It was expected that quality teaching and learning materials would have to be i) matched with the curricula and syllabi ii) piloted or tried out in pilot schools iii) promoted competences intended for the learners iv) enough, adequate

interesting and learner-friendly environment especially for the learners with special needs v) stimulated the learner's cognitive, affective and psychomotor domains during teaching and learning and addressed with the requirements of learners with special needs including hearing, visually impaired, and physically handicapped students.

Both the Education Sector Development Programme (ESDP) for year 2000 and Secondary Education Development Programme (SEDP) for the year 2004 have stated clearly that materials provision would be a responsibility of the parents, communities, local and central government as well as school themselves, while the central government provided capitation grants to schools. Schools would use criteria and guidelines set by the Ministry of Education, Science and Technology (MoEST) and the Tanzania Institute of Education (TIE) when procuring both textual and non-textual materials towards students' performance.

Curriculum and New Education Policy

On Friday of 13th February 2015, the Government of Tanzania had announced the Education and Training Policy by introducing free primary and secondary education. In this education policy, there would be some changes in the education system from elementary, primary and secondary of the form of 1 + 6 + 4 + 2 + 3. The system implies that the primary education will start from elementary up to secondary level. The new system is far different from one of 2 + 7 + 4 + 2 + 3 + which means elementary education is 2 years, primary education 4 years, secondary education 4 years, advanced level 2 years and the university level is three years and above (Nuffic, 2014). The changes entail that even the age of a child to start school will change, the curriculum will comprise the vocational training education, and information technology that will enable the candidates to be employed in Tanzania or abroad. Moreover, the education policy that has been introduced has relevance with the employment policy of the year 1999 that announces that in order one to be qualified for employment should have the minimum education of at least form four (MoEVT, 2014).

Challenges in Curriculum Changes

Wandela (2014) revealed that some of the challenges facing teachers and students include lack of teaching and learning materials, shortage of classrooms, funding of education, curriculum issues, and dropouts in the whole process of student performance. It has been noted by Nyoni (2018) and Tilya & Mafumiko (2018) that inadequate teaching and learning materials affect teachers' ability to implement the changes made by new curriculum changes hence leading to students' poor performance. With the new curriculum, teachers lack time for preparation to cope with these changes in order to improve their skills and knowledge towards their competence in the implementation of these new syllabi. Also, students lack awareness of these changes that occurred in the syllabi and encounter difficulties to know how they can go about learning and using and adopting new materials (Meena, 2009).

Theoretical Thinking

The Tanzania education system has a lot of misperception of saving the children and the education needs. According to the behaviourism learning theory by Thorndike (1935), Watson (1913) and Skinner (1957) that says learning is under the imitation, practice, reinforcement and force habit, which is automatically acquired by means of stimulus and response (Pritchard & Woollard, 2010). This acquisition is in terms of mechanical repetition from everyday life activities, which are normally the same, but any change can facilitate learning to stop or occur with some problems. The changes in education policy can result in positive and negative effects and some of them include introducing a new system of grades in

2013, the system of GPA in 2014, introducing primary education for 10 years. The dilemma of changing the language of instruction from English language to Kiswahili so as to make Kiswahili the language of instruction in all levels of education. This will be much challenging because children learn all subjects in Kiswahili for primary school years except the English subject but soon when they reach secondary school and later university, they face difficulties to use English language since they had got used to the Kiswahili language, the Tanzania national language of pride.

Methodology

A qualitative design was used in this study since the research design reflected the framework that specified the types of information collected in the field. Data were collected from two schools which are anonymous. The tools used in this study included an interview guide. This tool is particularly effective for measuring subject behavior, preferences, intentions, attitudes and opinions (Mathiyazhagan & Nandan, 2010). The interview was chosen because of its flexibility as it enabled the interviewer to probe responses and investigated motives and feelings which a questionnaire can never do (Bell, 2006).

Purposive sampling was used whereby the respondents, including teachers, Headmaster/Headmistress, and students where every category got a chance to participate. The study involved a sample of 48 respondents from two secondary schools, which means each school comprised 20 students, three teachers and one Headmaster/Headmistress. The details are presented in Table 1.

On interviewing, this was used to gather primary information from teachers. Oral questions that involved face to face interviews with Headmasters/Headmistress and teachers so that they provided the required information to meet the responses for the specific objectives. In order to increase the reliability and the validity of the data, similar questions were asked to the participants at different times.

Table 1: Number of respondents

School	Number of Respondents		Total number of Respondents
	Male	Female	
School A			
Headmaster/Headmistress	0	1	1
Class teachers	2	1	3
Students	10	10	20
School B			
Headmaster/Headmistress	1	0	1
Class teacher	1	2	3
Students	10	10	20

Regarding data processing procedures, data that were collected through interviews were analyzed qualitatively. On the ethical issues, the researcher followed the principles of research, such as seeking permission to relevant authorities and the researcher told the respondents about the purpose of the study and ensured confidentiality.

Findings and Discussion

How do Curriculum Changes affect Academic Performance?

In addressing the first objective of the study, which was on how do curriculum changes in ordinary level secondary education affect school performance, it is shown in Figure 1 that 30 respondents out of 48 believed that curriculum changes bring good academic performance to students. On the other hand, 18 of respondents believed that curriculum changes bring poor performance to students. These participants argued that curriculum changes resulted in good academic performance to the students and that the changes encourage teaching and learning in secondary schools. One participant argued that

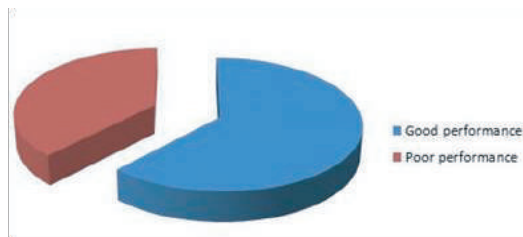


Figure 1: Academic performance from the research data

The curriculum changes make learners undergo day to day life changes, hence the creation of the additional knowledge and skills to the learners adhering to the environmental changes in the world. Furthermore, good performance occurs because of the curriculum changes motivate the student to study very hard with the aim of getting distinctions, merits and pass because of this new system of ranking grade students (Male teacher, School A).

On another hand, some of the participants who claimed that there is no connection between curriculum changes and academic performance to students in ordinary level secondary schools, believed that curriculum changes cannot bring good academic performance. Participants in this category mentioned some of the factors in which curriculum changes result to poor performance to students at the ordinary level of secondary education.

These factors include a syllabus that does not respond to the curriculum changes, the academic performance of the students depends on other several factors such as good education policy, good teaching, and learning environments, motivation to both teachers and students. The curriculum change leads to poor performance to students as curriculum developers are not the best competent teachers in the profession and some have politicians' thinking vying for political posts (Female teacher, School B).

Notwithstanding, the participants believed that it is difficult for the curriculum change to bring good academic performance simply because curriculum change has no connection with ability of the students because some of the students are good in learning hence changes of curriculum facilitates them to learn harder and some who are the slow learners remain in class performance though there are changes in the curriculum. One participant noted that

Curriculum changes require teachers to adapt their teaching methods, lesson plans, and instructional materials. If teachers receive adequate training and support to implement the new curriculum effectively, it can positively impact academic performance. However, if teachers are not adequately prepared, they may struggle to deliver the curriculum effectively, leading to a decline in academic performance (Teacher, School A).

On the other hand, curriculum changes should aim to promote equity and accessibility in education. If the new curriculum addresses the diverse needs of students, including those from marginalized backgrounds, it can contribute to improved academic performance by fostering inclusivity and providing equal learning opportunities for all. One participant said:

Implementing a new curriculum can sometimes create challenges during the transition period. Students who were accustomed to the previous curriculum may initially struggle to adapt to the changes. This transition period can impact academic performance as students and teachers adjust to new expectations, content, and teaching methodologies (Teacher, School B).

Furthermore, curriculum changes can have a significant impact on academic performance in Tanzania, as they directly influence the teaching and learning processes in schools. When curriculum changes are implemented in alignment with the educational goals of the country, they can enhance academic performance. For example, if the new curriculum focuses on critical thinking, problem-solving, and practical skills, students may develop a deeper understanding of the subject matter and perform better academically. One participant commented that

Changes in the curriculum often necessitate the development or procurement of new textbooks, learning resources, and materials. If these resources are not readily available or of poor quality, it can hinder students' understanding and performance. Conversely, if well-designed and relevant resources are provided, they can support students' learning and enhance academic performance (Male student, school A).

In order for the curriculum changes to be effected, one of the schools had the idea of providing tuition to students so that the students could perform better in the school. This kind of tuition is not free for the parents have to pay to the school. This may act as a barrier to education, preventing some students from continuing their studies. Families with limited financial resources may struggle to afford tuition fees, leading to lower enrollment rates and higher dropout rates and this lack of access to education directly hampers academic performance. One participant said:

When students' families invest in education by paying tuition fees, it can enhance motivation and a sense of responsibility towards academic achievement. Students may be more inclined to take their studies seriously and actively engage in learning opportunities, leading to improved academic performance (Student, School B).

Concurrently, for attracting and retaining well-qualified teachers for effecting curriculum changes, the study has revealed that with the tuition fees, the school can offer competitive salaries and have well-compensated teachers who are more likely to be motivated, dedicated, and invariably deliver higher-quality instruction, which can positively influence students' academic performance. Conversely, it has been argued by the participants that the relationship between tuition fees and academic performance in Tanzania can be complex and influenced by various factors. It is important to note that the impact of tuition fees on academic performance is multifaceted and can vary depending on individual circumstances, educational institutions, and broader socio-economic factors. Policymakers and stakeholders need to consider these complexities while addressing the issue of tuition fees to ensure

equitable access to quality education and promote better academic outcomes for all students in Tanzania. On this complex note of curriculum changes, one participant had this to say:

Schools often face challenges such as overcrowded classrooms, limited resources, and a shortage of qualified teachers, private schools generally offer higher-quality education but at a higher cost. Students who can afford the higher tuition fees in private schools may have access to better learning environments, resources, and qualified teachers, which can positively impact their academic performance but in the long run will create educational inequality and contribute to social disparities. Students from wealthier backgrounds who can afford tuition fees may have greater access to educational opportunities and resources, widening the performance gap between different socioeconomic groups (Student, school A).

Curriculum Changes Affect the Teaching and Learning Materials

As for objective 2 of the study, the research participants who were forty-four in number out of forty-eight, expressed the view that curriculum changes did not match with the relevant teaching materials in the schools. It was strongly emphasized that there is no relevance between teaching and learning materials and curriculum changes in ordinary secondary education. This implies that those participants who argued that there is the relationship in the curriculum change and teaching and learning materials were putting their consideration on the fact that curriculum changes were part of policy but not relevant with teaching and learning materials. The same old teaching and learning materials were still observed in the schools. This is substantiated with the following quote from a participant who said:

First teaching and learning materials in ordinary level secondary education are scarce and therefore teaching materials do not respond to the curriculum. Secondly, one curriculum programme has more than one teaching and learning textbooks and thirdly, textbooks used in secondary schools jingle well with teachers and the students (Male student, School A).

On the same note, another participant did not mince words and had the following said:

Schools face shortages of textbooks, reference materials, and other educational resources. This scarcity makes it difficult for both teachers and students to have the necessary materials to support effective teaching and learning. The quality of textbooks are outdated and some contain poorly written materials which contain inaccuracies, insufficient content coverage, inappropriate language and this hampers the learning process. The curriculum changes need to address these long standing challenges for better academic performance (Female teacher, School A).

Therefore, in most cases, the respondents ignored the argument that curriculum changes respond to the teaching and the learning materials in ordinary level secondary schools. The teachers and the students suggested that in developing or changing the curriculum in secondary schools, the teaching and the learning materials should be considered to make the curriculum change advantageous to both teachers and students. One participant said:

Teaching and learning materials like textbooks and other resources help the student to understand the subject matter better as these are needed resource materials in the learning process of the curriculum. During actual teaching, a lot of interactions take place in the class that enrich the participatory methodology but without the required facilities, academic performance cannot be attained. We cannot have a miracle in academic performance without the academic essentials (Head of school).

Despite the actual teaching, students are not aware of the changes of the curriculum. The students are of the view that what the teachers are giving them are the best and that they cannot critically question the teachers on what is being taught. Teachers feel undermined when they encourage students to interrogate the knowledge they teach and, hence the teachers may reject or modify the curriculum principles on grounds of being inconsistent with their deeply held beliefs and undermining their position of knowledge authority (Tarmo, 2019) The students have not been exposed to changes in the curriculum. One of the teachers said:

Cost can be a significant barrier for many students and their families. Textbooks and other learning materials can be expensive, making them unaffordable for some parents. This limits students' access to necessary resources, hindering their ability to study effectively and, therefore affecting the academic performance (Teacher, School A).

In addition, curriculum changes have a bearing on examinations. Curriculum changes incorporate new knowledge, research findings, and developments in various fields. This ensures that students are learning relevant and up-to-date information. There is a growing focus on developing skills such as critical thinking, problem-solving, creativity, communication, collaboration and digital skills as well. Curriculum may be adjusted to incorporate these skills across different subject areas. On assessing and providing testing and evaluating these skills, one participant mentioned that the curricular changes ought to promote inclusivity and diversity, ensuring that students learn about different cultures, perspectives, and experiences. One participant said:

Examination formats may vary, including multiple-choice questions, essays, practical assessments, oral examinations, and project-based assessments. Some educational systems are moving away from traditional exams and incorporating alternative assessment methods, such as portfolios, presentations, group projects, and performance-based assessments. Emphasis on assessing students' ability to apply knowledge, think critically, and solve problems rather than relying solely on memorization. Instead of relying solely on final exams, continuous assessment methods are being considered, where students' progress is evaluated throughout the academic year, considering class participation, assignments, quizzes, and other factors. There are also online examinations and assessments conducted on digital platforms utilizing advancements in technology (Teacher, School B).

Difficulties Facing Teachers and Students towards the Curriculum Change

In line with object 3 of the study, which focused on difficulties experienced, the participants responded as to whether “curriculum changes contributed to poor performance.” It was said that there is lack of fiscal, physical and human resources in ensuring fruitful curriculum

changes to the schools. This phenomenon contributes to poor performance in ordinary level secondary schools. One respondent provided the short explanations by giving the effects of curriculum change in ordinary level secondary schools by saying

Persistence change in curriculum disturbs completely the goal of education. This connotes that it makes difficult to implement and evaluate the knowledge acquired, and lastly teaching becomes more difficult and the syllabus confuses the subject matter to students. Those students from disadvantaged backgrounds may face additional obstacles, such as a lack of educational resources at home or limited support for their learning (Female student, School B).

In addition, the stakeholders of the schools should provide learning materials to their schools because most of parents have low incomes to meet all scholastic requirements of their students (Oneye & Onyango, 2021). Therefore, without all these support would lead to poor performance in ordinary level secondary schools. The following has been said by a one participant.

A teacher comes in the class to teach using his or her textbook but the students do not have the copy of the related subject textbook; this makes student to have no choice but forced to listen to the teacher attentively and it is difficult for the student to understand everything that is taught. It is important to have textbooks in the schools. Teaching without a book is like having caravan, which is a river without water. The students' brains cannot retain all that has been taught when there is no textbook where reference can be alluded to. Textbooks of every subject are in fact non-existent in schools. Therefore, do not expect excellent performance from students (Teacher, School A).

As a continuation of difficulties being faced by teachers and students, the participants mentioned the genuine problem of medium of instruction for any curriculum change. In Tanzania, education policies emphasize the use of English as the medium of instruction in secondary schools. However, many students come from diverse linguistic backgrounds and may struggle to understand complex subjects when taught in a language that is not their first language; that is being taught in English and not in Kiswahili further exacerbates this challenge. One of the participants had the following to say:

Many students have limited exposure to English outside of the classroom, which can make it difficult for them to develop proficiency in the language. There is a shortage of qualified English teachers in Tanzania. Some of the teachers themselves have limited proficiency in English, which can hinder effective instruction. This challenge requires a multi-faceted approach, including improving teacher training programs, providing adequate resources and support to schools, promoting community involvement in education, and adapting teaching methodologies linguistic diversity of Tanzania (Teacher, School B).

The study shows that both teachers and students experience several concerns due to curriculum changes that affect academic performance: 1) Introducing a new curriculum often required changes to the assessment and evaluation methods to align with the new learning outcomes and teaching approaches. Teachers needed support in developing new assessment

strategies and tools, and students needed time to adjust to the new assessment formats. Training was not provided to cope up with the changes resulting in affecting performance in addition to the logistical challenges encountered. 2) Some of the curriculum changes emphasized the integration of technology and required access to resources such as computers and the internet. From the study, there were with limited infrastructure and inadequate digital technology facilities for both teachers and students thus facing the challenges in accessing and utilizing the necessary resources, impacting their ability to fully engage with the curriculum changes from which academic performance. It has been observed that with the pressure to cover the syllabus so as to enable students to pass the National Examinations Council of Tanzania (NECTA) was identified by teachers as a major barrier (Kinyota, 2019). One participant said:

A curriculum change requires time for planning, training, and gradually phasing in the new content and facilitation techniques of teaching. However, limited timeframes or inadequate preparation periods can put pressure on both teachers and students, resulting in rushed implementation, understanding, and inadequate quality control mechanisms contribute to this issue, difficulties in adjusting to the changes. All these will cause the degree of academic performance (Teacher, School A).

Linking to the above challenges, there was lack of comprehensive training programs has hindered teachers' ability to adapt to the changes, leading to difficulties in delivering the curriculum effectively and therefore affecting academic performance. The curriculum changes encountered resistance from teachers and parents who are accustomed to the old system. This resistance stemmed from various factors, such as a lack of understanding of the rationale behind the changes, concerns about increased workloads, or skepticism about the effectiveness of the new curriculum. Overcoming this resistance and building acceptance among all stakeholders was a significant challenge. One participant said:

Addressing these challenges requires a comprehensive approach involving effective teacher training programs, adequate provision of instructional materials and resources, infrastructure development, community engagement, and careful planning and implementation strategies. Ongoing support and monitoring are crucial to ensuring successful curriculum changes and creating an environment conducive to quality education in Tanzania. Outdated or mismatched materials may not adequately cover the required content, leading to gaps in students' knowledge and skills (Teacher, School B).

Conclusion and Recommendations

Summary

The study was to assess the effects of curriculum changes toward performance in ordinary level secondary schools in the Kinondoni District in the Dar es Salaam region. The study involved 48 respondents whereby 40 participants were students and 8 participants were teachers and Head teachers. The study was conducted in line with research objectives. It was observed by researcher that most of the participants know the meaning of curriculum and others seemed to have little knowledge about it. It was very challenging and interesting topic to most of the participants as everyone explained it according to his or her knowledge of understanding. In most cases, the teachers suggested that the government should implement

the curriculum change in ordinary secondary schools by providing both learning and teaching motivational materials and good learning environment to both teachers and students as well. This will help them to manage the school environment and therefore raising the performance of students. In addition, teachers commented on the improvement of the teaching and learning environment as a way to improve the implementation of curriculum changes in secondary schools. Based on the findings, it was concluded that:

- The curriculum changes do not affect teaching and learning materials in secondary schools and that the curriculum changes may not have a strong bearing on the academic performance of students as teachers use their own curriculum covertly known as the “teacher curriculum” as noted by Bujosa et al. (2016).
- It can be added that curriculum changes lead to the negative effects on the performance of the students and conversely has some positive tendencies, this being the paradox.

Recommendations

The study recommends that:

- 1) The government should create a good teaching and learning environment in secondary schools so as to build positive effects of curriculum changes
- 2) The Tanzania Institute of Education should fully involve teachers in every step of the curriculum development process
- 3) The government should ensure that there is a permanent trend of sustainable curriculum in the education sector
- 4) Much of curriculum development process making should be guided by curriculum specialists that are not dictated by the political elites and all curriculum developers should be teachers by profession
- 5) Both the Government and the private sector have to train teachers when there are curriculum changes so that they are updated for new knowledge and technology.

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Access and Use of Information on Cervical Cancer Prevention among Rural Women in Mtwara, Tanzania

Martha S. Sware¹ and James E. Kazoka²

Abstract

This study was designed to assess access to and use of information for the prevention of cervical cancer among rural women in Tanzania with specific reference to Mtwara Region. The study used a mixed method research involving quantitative and qualitative methods in collecting data from women in different villages and health facilities within Mtwara Rural District. A total of 310 women of the reproductive ages were recruited conveniently. Quantitative data was collected through self-administered questionnaires and analysed by the SPSS software, while qualitative data from doctors and nurses was collected through in-depth interviews which were audio recorded, transcribed verbatim, translated and analysed using thematic analysis. The findings showed that the majority of women have heard about cervical cancer. The majority of women acknowledged the fact that pap smear / visual inspection of the cervix with acetic acid were common methods used to screen for cervical cancer. It has been noted that the radio and televisions are the main sources of information used by rural women. Furthermore, health workers and the radio were the most useful sources of information about the prevention of cervical cancer among rural women. It was further revealed that women of the reproductive ages experience challenges that include language, illiteracy and delay of information about prevention of cervical cancer. The study recommends that the government and health professionals should continue creating awareness, establish health information resource centres, train health professionals and establish mass campaigns and educational programmes. Rural women should continue visiting health facilities, use various sources of health information and participate in mass campaigns about prevention of cervical cancer.

Keywords: Information, Cervical Cancer, Rural Women, Tanzania

Introduction and Background Information

Prevention of cervical cancer among women is one of the priority health measures undertaken worldwide and in Africa, in particular. As a result, the provision of information on the prevention of cervical cancer among women is one of the measures taken seriously by many agencies (Osuchukwu & Ukachi, 2019). The information required may include, but not limited to, lifestyle, risk factors, treatment options, prognosis and patient-doctor communication (Boakye et al., 2018). Prevention is about tackling the upstream causes of ill health by promotion of healthy lifestyles (Royal College of Nursing - RCN, 2022). RCN (2022) further emphasizes that “prevention is cure”, thus women with access to information on the prevention of cervical cancer are more likely to take appropriate measures to prevent the disease. These measures may include early consultation with health professionals. The cervical cancer diagnostic programme helps health professionals to detect abnormal cells before they turn into cancer. Studies on cervical cancer (Mabelele, et al., 2018) have shown

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that women lack sufficient information about prevention, screening and treatment of cervical cancer.

Worldwide, more than 85% of women have been diagnosed to have cervical cancer and it is estimated that there were 570,000 new cases and 311,000 deaths of women (particularly middle-aged women) from cervical cancer globally in 2018 (Arbyn et al., 2020). Nascimento et al. (2018) have shown that over 85% of deaths occur in Low and Middle Income Countries (LMICs) where over 90% of the highest incidence rates of cervical cancer occur in sub-Saharan Africa (Brisson et al., 2020). However, cervical cancer is relatively low in high-income countries due to the introduction of the Human Papilloma Virus (HPV) vaccine and screening programmes i.e. Papanicolaou (Pap) test which has reduced the incidence of cervical cancer by 70% (Lopez et al., 2017). The incidence of cervical cancer is high in LMICs because little attention is given to early detection through screening; and where early detection screening is available, it is not effective due to limited access to information, low coverage, incapable laboratory and advanced treatment including vaccination (De Sanjose &Tsu, 2019).

Sadoh et al. (2018) contend that even when the vaccine is provided free of charge by national programmes, mass campaigns and educational information should be provided to the general public especially to women in order to optimise coverage, hence prevent cervical cancer among women. In this state of affairs, provision of health information to women aiming to promote knowledge on cervical cancer prevention is vital. This is expected to improve awareness and uptake of the available interventions among women (Osuchukwu &Ukachi, 2019).

In the year 2011, the Tanzanian Ministry of Health and Social Welfare introduced Visual Inspection of the cervix with Acetic acid (VIA) and Cryotherapy in over 300 sites, nationally. Despite launching these screening methods, women were not sufficiently informed about specific risk factors, prevention options of cervical cancer. Therefore, many did not see themselves as being at risk (Mabelele et al., 2018). This has greatly affected the uptake of the cervical cancer screening services as observed in a cross-sectional survey with women carried out by Runge and others which revealed that 82.7% of women did not have information of cervical cancer prevention (Runge et al., 2019). In order to mobilise global efforts to prevent cervical cancer, Tanzania introduced HPV vaccination to girls aged 9 to 14 years in 2018, being the seventh country in Africa after Uganda, Rwanda, Botswana, Mauritius, Seychelles and South Africa (Moshi et al., 2018). Further, a study by Cunningham et al. (2015) also showed that few girls and women had information about HPV vaccine, with major differences in percentage between rural and urban areas.

Furthermore, a study by Lopez et al.(2017) shows that each year cervical cancer contributes into approximately 270,000 women deaths globally. A significant number of deaths are from low and middle income countries including Tanzania (Finocchiaro-kessler et al., 2016). Globally, it is projected that by the next decade about 500,000 deaths will occur due to cervical cancer each year with the majority of deaths occurring in sub-Sahara Africa (New-Aaron et al., 2020). In order to reduce this alarming rates of morbidity and mortality associated with cervical cancer, provision of health information on the prevention of this disease among women is of great importance (Osuchukwu & Ukachi, 2019).

In Tanzania, as in other many developing countries, access to health information among rural residents is a big challenge due to ignorance, cultural constraints, economic factors, male

dominance and unfriendly health care services (Lim & Ojo, 2017). In Tanzania, about 75% of women between 15– 49 years of age live in rural areas where information on prevention of cervical cancer is not easily accessible (Bateman et al., 2019). Several initiatives have been taken by the Ministry of Health Community Development, Gender, Elderly and Children, in collaboration with Non-Governmental Organizations and associations like the Johns Hopkins Programme for International Education in Gynaecology and Obstetrics and the Medical Women Association of Tanzania, to ensure access to information on cervical cancer prevention among women (Moshi et al., 2018).

It is noted that in Tanzania little is documented on the extent in which rural women have access to information on cervical cancer prevention. Therefore, this study was designed to examine the extent rural women access and use of information on cervical cancer prevention in Tanzania. Specifically, the study aimed to:

- i) Examine the extent rural women are aware about cervical cancer and its prevention;
- ii) Determine the sources of information used by rural women for the cervical cancer prevention and;
- iii) Find out challenges of accessing information for the cervical cancer prevention among rural women in Tanzania.

Review of Related Literature

Women’s Awareness on the Prevention of Cervical Cancer

It has been established that lack of awareness among women on the prevention of cervical cancer affects cervical cancer screening and HPV vaccine uptake in different countries, which is the major prevention strategy for cervical cancer. A study by Wakwoya et al. (2020) showed that women who were aware about cervical cancer were likely to utilize the preventive service more than women who had less awareness. Cervical cancer is the fourth most common cancer in women worldwide, and which costs lives of more than 270,000 women yearly (Lopez et al., 2017; Nascimento et al., 2018). In addition, 85% of these deaths occur in LMICs including Tanzania (Dahiya et al, 2019). A study conducted in New Delhi, India by Dahiya et al. (2019) to assess awareness among women regarding risk factors, prevention, and early diagnosis of cervical cancer and to assess the attitude and practice of women toward cervical cancer revealed that women’s awareness influences their health-information seeking behaviour among them. Moreover, when they are aware and have a positive attitude towards cervical cancer vaccine, the risk of getting HPV infection may be further reduced hence prevent cervical cancer.

Furthermore, a study conducted at the University of South Florida by Christopher (2016), on women’s awareness about the link between HPV and cervical cancer, found out that women are not aware about the link between HPV and cervical cancer. A woman’s positive HPV status puts her at high risk of developing cervical cancer if treatment is not provided. Additionally, patients should be aware of their HPV status as it may influence future sexual health decisions for themselves and their families, including conversation with current sexual partners (Christopher, 2016).

According to the World Health Organization (WHO, 2021), women of the reproductive age in the developing world are partially aware about the prevention of cervical cancer. This affects the uptake of screening services toward preventing the disease (Simmons et al., 2017). More studies (Mugassa & Frumence, 2020) have revealed established factors that affect the utilization of cervical cancer screening and treatment services that include ignorance, lack of

health facilities that provide screening services, fear, religious belief and taboos that claim that cervical cancer cannot be prevented. A study conducted by Gottschlich et al. (2020) in Guatemala showed that 49 women were aware of cervical cancer before undergoing cervical cancer screening. In this study, it was reported that only a few of them were aware of the possible causes of cervical cancer.

In an effort to improve women's awareness about prevention of cervical cancer among women in Japan, a study by Fujiwara et al. (2015) indicates that eligible women were provided with adequate information on possible benefits of cervical cancer screening to improve their level of awareness on cervical cancer screening. Another study by Tapera et al. (2017) which was carried out in Botswana among university students confirmed that, in order for women to use cervical cancer screening services, they need to be aware about the service because lack of awareness and negative attitude of women towards cervical cancer screening services may extremely affect the uptake.

As mentioned earlier, awareness of women on the prevention of cervical cancer in sub-Saharan African countries is low compared to other parts of the world. Various studies conducted in different countries have also revealed that awareness of women about prevention of cervical cancer is very low (Wakwoya et al., 2020). In a study done in Morocco to assess awareness of cervical cancer among the general population revealed that 20.9% and 19.1% had heard of cervical cancer and cervical cancer screening, respectively. Approximately four percent of women knew someone who had cervical cancer and 13.0% reported that they had been screened for cervical cancer (Belglaiaa et al., 2018).

The absence of awareness on cervical cancer prevention strategies is the main obstacle to cervical cancer prevention and control in developing countries including Tanzania. Women's awareness on the prevention of cervical cancer influences the use of prevention interventions. However, it has been demonstrated that rural women are in sufficiently aware about prevention of cervical cancer (Ifediora & Azuike, 2018). In Ghana, most women had little awareness about cervical cancer in which the majority (69.7%) scored between 1-39% and only 9.7% scored between 65-100%.

Ethiopia is one of the SSA countries with high incidences of cervical cancer. According to a study done in the north-east part of the country, 51.9% of respondents were sufficiently aware about the disease. However, only 11% had undergone cervical cancer screening at least once in their lifetime. In Mekelle, in the north part of Ethiopia, among eligible women, only 14.7% of women who were aware of cervical cancer screening had undergone cervical cancer screening (Ifemelumma et al., 2019).

Sources of Information on the Prevention of Cervical Cancer

Regarding access to information about cervical cancer, rural women get most of the information from healthcare professionals through the television and internet. To increase the knowledge among women, it is important to motivate healthcare professionals to be active in educating women about cervical cancer. Although the internet is a powerful source of information, it does not always provide the most accurate information as some of the websites are not reliable sources. So, people should access information from reliable sources like the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEC) website, health facilities and resource centres (Kurzewska-Michalak & Kardas, 2017).

In many African and Asian countries, cervical cancer screening services are inadequate despite bearing the highest cervical cancer burdens in the world (Ifediora & Azuike, 2018). Health workers, especially nurses, play a significant role in educating the public on health related issues including prevention of cervical cancer (Ifemelumma et al., 2019).

A study by Dawson et al. (2020) found out that the most common sources of information on cervical cancer were health workers (41.2%) and friends/family members (26.5%) whereby only (29.4%) had received proper information on prevention of cervical cancer. Many studies which have been done among women in the past (Nelson et al. 2018) have proved that nurses play a major role in enlightening the public on cervical cancer screening; so their awareness and attitude toward cervical cancer is very crucial for promoting women's uptake. A study conducted in Dar es Salaam at Amana Hospital, in Tanzania, by Bateman et al. (2019) shows that the majority of respondents had heard about cervical cancer from physicians or other health care providers, at the time of screening. This shows that rural women access information about cervical cancer from various sources including health care providers, radio, television, and social media.

Use of Information for the Prevention of Cervical Cancer among Rural Women

Although technology has simplified access to cervical cancer information, rural women rarely use the information partly because they cannot have access. The Social Learning Theory believes that health information seeking behaviour is influenced by individual knowledge, disease perception, socio-demographic factors and the availability and accessibility of health services. People seek and utilize health information when they perceive themselves as potentially vulnerable to the disease (Habtu et al., 2018). In Iran, all women aged between 35-54 years are educated about cervical cancer screening and must undergo the Pap smear test immediately after marriage and after every three years. Although the Pap smear test is performed free of charge in most health facilities, only a small proportion of eligible Iranian women have taken the Pap smear test, with percentages ranging from 14.8 to 28.3%. Several reasons account for such poor response; these include, not knowing the importance of the test, the difficulty involved in accessing the test, some people are scared about the results of the test, while others are embarrassed to undergo the test (Khazae-Pool et al., 2018). Furthermore, cervical cancer survivors are more keenly interested in receiving information about cancer, despite having undergone or finished active therapy, than those who have not yet experienced the disease (Shea-Budgell et al., 2014). Moreover, there is paucity of literature regarding the use of information on cervical cancer among rural women.

Challenges of Access of Information on the Prevention of Cervical Cancer

Women in rural and low-income settings face various challenges in accessing information on prevention of cervical cancer. These may relate to education, geography, cost, access to healthcare and family acceptance to seek care that may not exist in high income areas. Nepal has a patriarchal social structure, in which women's health is influenced by existing socio-ecological conditions. Only 57.4% of women are literate compared with 75.1% of men (Darj et al., 2019). A qualitative study to acquire better insight into perceived barriers and challenges to access information on prevention of cervical cancer identified that development of a culturally adapted intervention to promote knowledge of prevention of cervical cancer for immigrant women from different communities increased their participation in cervical cancer screening (Darj et al., 2019).

In low-resource settings such as Cusco, Peru, and the surrounding rural communities in the Peruvian Andes, structural barriers to prevention of cervical cancer include lack of access to health care and shortage of quality facilities and laboratories (Freijomil-Vázquez et al., 2019). Although the media is considered the most reliable form of communicating information on prevention of cervical cancer, research shows that there are still some communication challenges during the process of disseminating information through the media. During the communication process various challenges may arise such as low levels of awareness, myths and misconceptions, fear, stigma, and language barriers which affect distribution of information about the prevention of cervical cancer among women (Kisiangani et al., 2019).

Theoretical Framework of the Study

Conceptually, the study was guided by the Hierarchical Model of Access. This model graphically represents four elements as essential elements for information access: physical access, instrumental skills, usage and information skills (Steyaert, 2002). Physical access is very significant in the access and use of information on prevention of cervical cancer among rural women. When health facilities or information centres are within the locality, this simplifies information access among rural women. Instrumental skills are competencies in using various sources and technologies in accessing and using information on prevention of cervical cancer, which a woman possesses. If a woman is competent in utilizing various sources or technology to access information, she will have more access to information on prevention of cervical cancer than the personal without instrumental skills. Usage denotes the ability of a woman to use information on prevention of cervical cancer. A woman may have access to information but when she does not use such information to better her health outcome, access is useless. Finally, information skills involve the ability of the rural woman to analyse reliable sources of information on prevention of cervical cancer because there is a lot of information that could be accessed, which is not reliable. All these elements are presented as a pyramid with physical access at the bottom and information skills on top (see Figure 1).



Figure 1: The Hierarchical Model of Access
Source: Adopted from Steyaert (2002)

Methodology

A mixed method study involving quantitative and qualitative methods of concurrent triangulation design was used. This design was selected because of its ability to develop a more complete understanding of the topic and provided well-validated and substantiated findings (Gupta et al., 2017). A descriptive design was selected because of its ability to describe the issues under study and to provide well-validated and substantiated findings (Omar, 2015). The study was conducted in Mtwara Rural District in different villages and

health facilities. Mtwara Rural District was chosen because it is one of the rural districts of Tanzania facing the same challenges of accessing information on prevention of cervical cancer.

This study involved women of the reproductive age (18-49 years), nurses and medical doctors. Women of the reproductive age group were enrolled as it is the most affected group of women because of being sexually active (Baussano et al., 2017). Furthermore, nurses and doctors were involved in this study because these are people involved in educating, screening and taking care of women with cervical cancer. In order to achieve the objectives of this study, the sample estimation for the quantitative study was 310 and for the qualitative study saturation point was achieved at 10 key informant interviews (KIIs).

Convenience sampling was used to select women respondents from villages and wards from Mtwara Rural District. Convenience sampling is a type of non-random sampling whereby members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study (Gravetter & Forzano, 2012). The method was selected because it was affordable, easy and the subjects were readily available.

A self-administered questionnaire with close-ended questions was used to collect data from women of the reproductive age. This method was chosen because it was cost-effective and enabled the researcher to generate huge data within a short period as questions were designed specifically to be completed by a respondent without intervention of the researchers (Rada, 2019). Quantitative data were compiled, numbered and checked for completeness and appropriateness before being subjected into Statistical Package for Social Science (SPSS) version 23 for Microsoft Windows. Descriptive statistics such as frequencies and proportions were generated for easy summarization of the data. Cross tabulation and chi-square test were used to assess the statistical significance of associations between variables. Thematic analysis (Erlingsson & Brysiewicz, 2017) was used to analyse all KIIs.

Results

Socio-demographic Characteristics of the Respondents

The study involved various socio-demographic characteristics that include age, marital status, education level and religion of respondents. These characteristics may have a connection with access and use of information on prevention of cervical cancer. The findings show that 42.3%

Table 1: Demographic Characteristics of Respondents

Characteristic	Frequency	Percent
Residence		
Ikwama	100	32.3
Nangogoli	100	32.3
Mgao	110	35.5
Total	310	100.0
Age		
18-27	131	42.3
28-37	92	29.7
38-47	69	22.3

48 and above	18	5.8
Total	310	100.0
Marital status		
Married	171	55.2
Single	67	21.6
Divorced	50	16.1
Widowed	20	6.5
Separated	02	0.6
Total	310	100.0
Education		
Primary	241	77.7
Secondary	61	19.7
College	08	2.6
Total	310	100
Religion		
Muslim	242	78.1
Christian	66	21.3
Pagan	02	0.6
Total	310	100.0

Source: Field data, 2021

were aged between 18-27 years, 29.7% between 28-37 years, 22.3% between 38-47 years. Fifty-five percent of respondents were married and 21.6% were single. Also 77.7% had primary education, 19.1% had secondary education and 2.6% had college education. More details are presented in Table 1. These demographic characteristics information were taken into consideration and tested to find out if they had any connection with access and use of information on prevention of cervical cancer.

Awareness of Women about Cervical Cancer

Respondents were asked whether they had ever heard about cervical cancer. A total of 258(83.2%) women reported to have heard about cervical cancer, while 52(16.8%) had not had any information about cervical cancer (Table 2).

Table 2: Women who had Heard about Cervical Cancer

Response	Frequency	Percent
Yes	258	83.2
No	52	16.8
Total	310	100.0

Source: Field data, 2021

The findings in Table 2 show that most rural women were aware about cervical cancer and therefore, were likely to be key teachers of other rural women who were not aware. Also, a chi-square test was performed to examine the relation between awareness and educational level. The findings presented in Table 3 show that there was no significant association

between education level of the respondent and awareness about cervical cancer ($\chi^2 = 4.26$, $df = 2$ $p = .119$).

Table 3: Association between Level of Education and Awareness about Cervical Cancer

Educational level	Heard about cervical cancer		Total
	Yes	No	
Primary education	196 (63.2%)	45 (14.5%)	241 (77.7%)
Secondary education	56 (18.1%)	5 (1.6%)	61 (19.7%)
College	6 (1.9%)	2 (0.6%)	8 (2.5%)
Total	258 (83.2%)	52 (16.7%)	310 (100.0)

Source: Field data, 2021

The findings in Table 3 show that the education level of a particular woman does not make her aware of cervical cancer. However, a study conducted in Northern Uganda (Obol et al., 2021) show that there is a relationship between awareness of cervical cancer and practicing screening and having vaccinated the daughter as having awareness of cervical cancer and conducting these practices. Furthermore, their study findings show that there no associations between screening women for cervical cancer and staff qualifications. So, a woman may have a high level of education but she may be unaware about cervical cancer and vice versa.

Awareness on Screening Test Information for Cervical Cancer

Respondents were asked whether they were aware of any common screening test for cervical cancer. The findings show that out of 310 respondents, 218(70.3%) managed to point out the right screening test (Pap smear/VIA as the common screening method used), 50(16.1%) mentioned the X-ray and 42(13.5%) mentioned Biopsy (Figure 2).

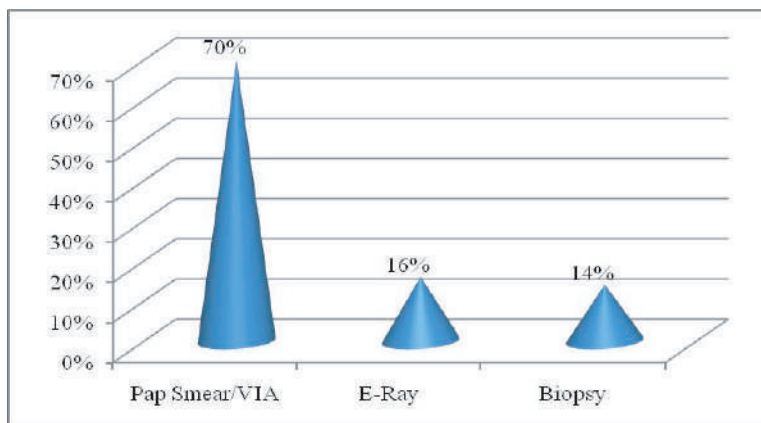


Figure 2: Women's Awareness on Cervical Cancer Screening Test

Source: Field Data, 2021

The findings above show that rural women were aware of the specific screening tests for cervical cancer such as the Pap test, VIA, X-ray and Biopsy. It should be noted that screening is used to detect precancerous changes or early cancers before signs or symptoms of cancer occur. The overall goals of cancer screening are to reduce the number of people who die from cervical cancer, or completely eliminate deaths caused by cervical cancer, and reduce the number of people who develop the cancer.

Sex Affected by Cervical Cancer

In order to ensure that women are aware about cervical cancer, participants were asked which gender is affected by cervical cancer. The findings show that 300(96.8%) respondents said that females were affected by the disease, and 10(3.2%) said males were affected by the disease (Figure 3).

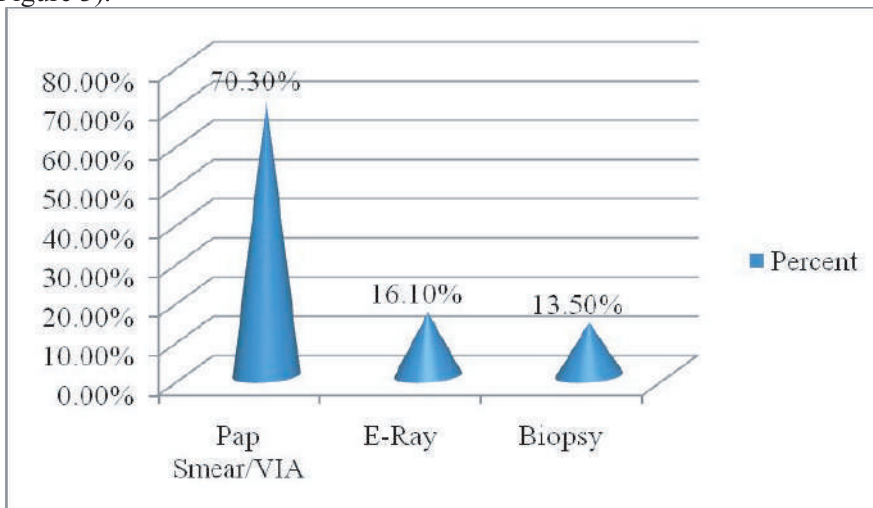


Figure 3: Sex Affected by Cervical Cancer

Source: Field Data, 2021

These findings show that respondents knew which sex is affected more by cervical cancer. Furthermore, the findings from the key informant interviews indicate that participants seemed to be aware of the information on prevention of cervical cancer. They were aware of the situation of cervical cancer in the area. Also participants were aware that Pap smear and VIA are common methods used for cervical cancer screening. For example, two respondents had this to say:

The situation of cervical cancer in this area is on the average; I have not experienced many women with signs of cervical, only few (Participant 4, Doctor).

The method which is used to screen for cervical cancer is applying acetic acid on the cervix and observing changes after application of that chemical. This is the method that help us to detect early signs of cervical cancer (Participant 1, Doctor).

The findings indicate that the majority of women 257(83.2%) have heard about cervical cancer. The findings further indicate that there is no any statistical significance between the level of education and cervical cancer awareness. Furthermore, 218(70.3%) respondents

indicated that that Pap smears and VIA are common methods used for cervical cancer screening. However, some study findings (Simmons et al., 2017; Tapera et al., 2017; Oluwole et al., 2017; Belglaiiaa et al., 2018; Mugassa & Frumence, 2020; Gottschlich et al., 2020) have reported lack of awareness about cervical cancer among women of the reproductive age. The findings of this study show that women of the reproductive age living in rural areas are aware about cervical cancer; however, this does not mean that they also have access to information on prevention of the disease. This relates to a study which was done in northern part of Ethiopia which showed that 51.9% of respondents were sufficiently aware about the disease (Ifemelumma et al., 2019).

Sources of Information on Prevention of Cervical Cancer

Figure 4 shows that the radio 306(99%) and television 286(92%) were main sources of information used by respondents to get information on prevention of cervical cancer which were followed by newspapers 263(85%), library 255(82%) and health workers 247(80%).

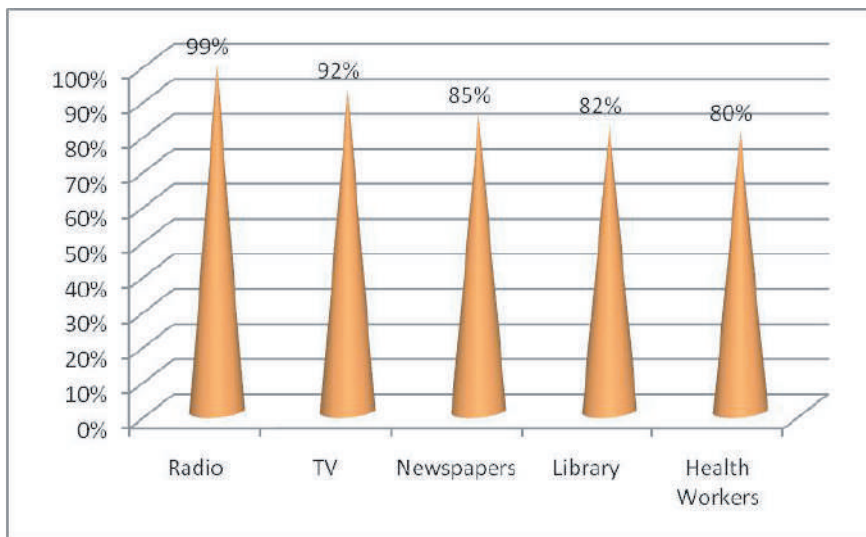


Figure 4: Source of Information on the Prevention of Cervical Cancer

Source: Field Data, 2021

The findings show that the source of information used to access information about cervical cancer are health workers along with television, social media, radio and NGOs. The findings of this study show that radios and television are the main sources of information on prevention of cervical cancer used by rural women. This calls for health workers to be active in providing education to women about cervical cancer. A study by Ifemelumma et al. (2019) shows that health worker especially nurses play a significant role in educating the public on health related issues including prevention of cervical cancer. Furthermore, Nelson et al. (2018) reveal that nurses play a major role in lightening the public about cervical cancer screening. It should be noted that women awareness and their attitude toward cervical cancer is very crucial on health-related issues and are therefore crucial for promoting women's uptake information related with the prevention of cervical cancer. This is because health workers are viewed as role models. Thus they should be engaged in provision health education about cervical cancer to the populations they serve.

Useful Sources of Information on Prevention of Cervical Cancer

Respondents were asked to identify the most useful sources of information on prevention of cervical cancer. The findings show that health workers 265(89.5%) and radio 277(76.7%) were the most useful sources of information on the prevention of cervical cancer used by rural women (Figure 5).

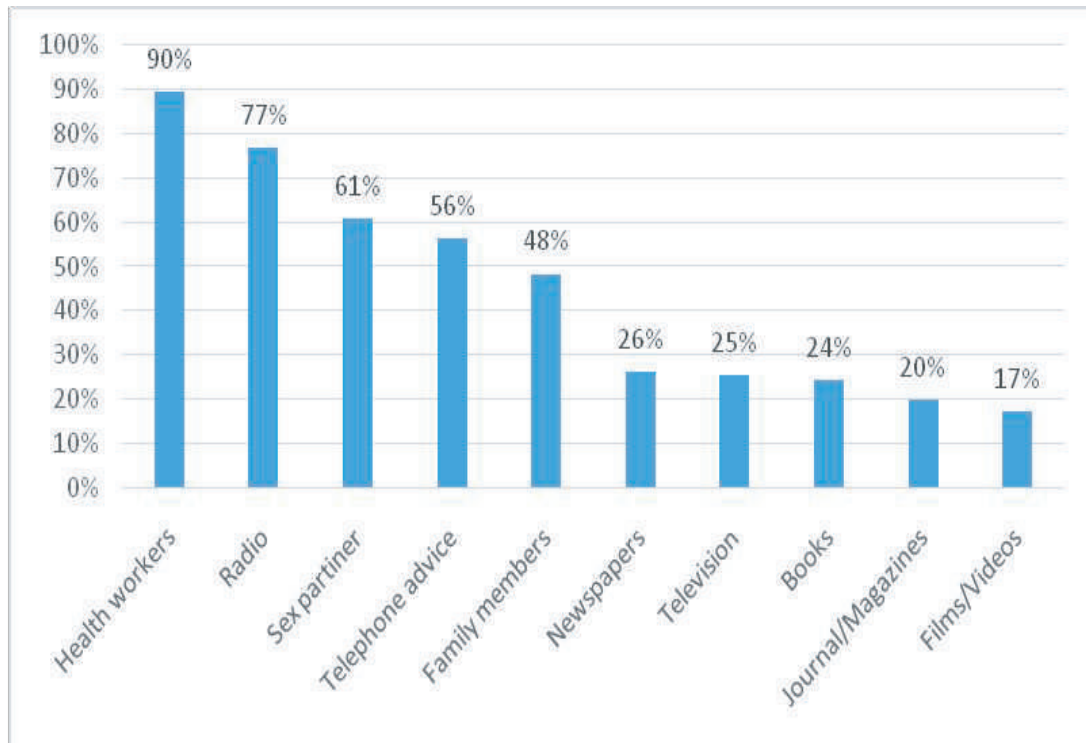


Figure 5: Sources of Information about Cervical Cancer Prevention

Source: Field Data, 2021

The findings show that health workers and the radio are the most useful sources of information on prevention of cervical cancer among rural women. Conversely, health workers whom seem to be among the useful sources of information, they need to be trained and well-versed in the use of various sources of information such as computer and internet to source for and expand their knowledge base in modern management of cervical cancer. Furthermore, listening to the radio frequently is among of the sources of information for prevention of cervical cancer. Radio programmes may be a better platform for disseminating cervical cancer awareness and education among women. Packaging of messages for cervical cancer could be targeting radio audience like rural women.

Social Media as a Source of Information for the Prevention of Cervical Cancer

Social media is another source of information used by women of the reproductive age. Despite the availability of many social media for use in the society, when respondents were asked which one was the relatively more useful social media, they mentioned WhatsApp and Facebook 257(89%) and 193(67%) respectively (Figure 6).

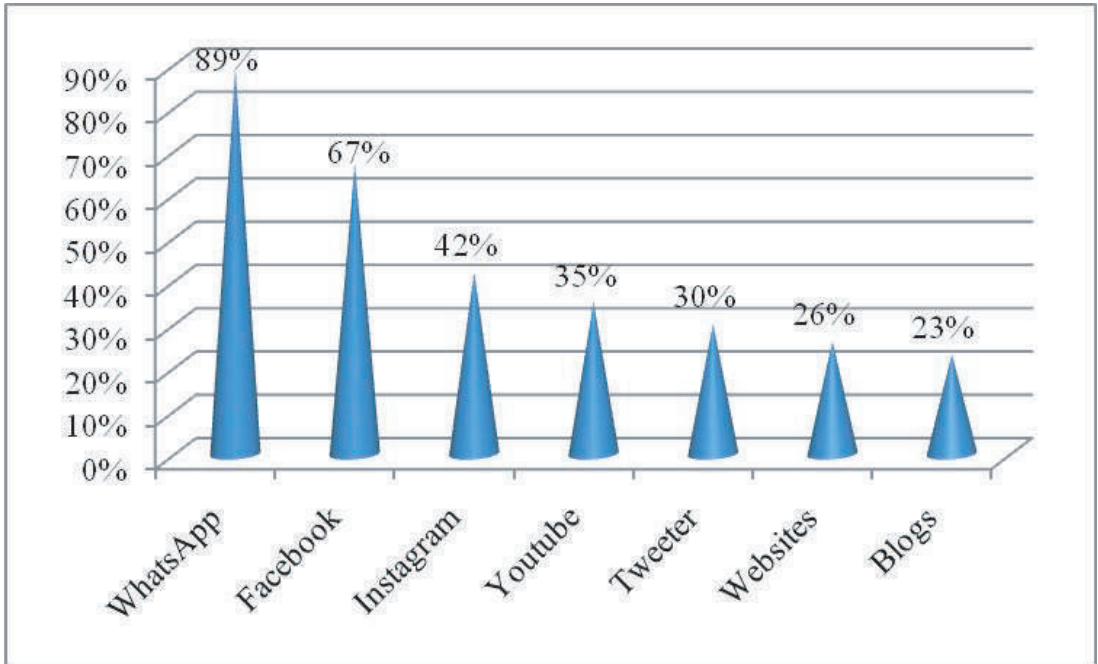


Figure 6: Social Media Used as Sources of Information for the Prevention of Cervical Cancer

Source: Field data, 2021

The finding shows that WhatsApp and Facebook are the most popular social media used by rural women for accessing information on prevention of cervical cancer. Moreover, during the individual in-depth interview, respondents reported that the mass media and publications are the main sources of information about prevention of cervical cancer in rural areas. In particular participants admitted that the television, radio, internet, magazines, books, newspapers and brochures were used as sources of information. Furthermore, seminars and health education were also reported as other sources of information about prevention of cervical cancer. This was narrated as follows:

The source of information which is mostly used to disseminate information on prevention of cervical cancer to women is health education but in rare occasions we use television particularly at waiting areas where there are many clients waiting for health services (Participant 3, Nurse).

Another participant added:

Women get this information to prevent cervical cancer from various sources; these include health education through brochures, magazines and other publications and local radios (Participant 1, Nurse).

The findings show that the television and radio, internet, magazines, books, newspapers and brochures were the main sources of information for the prevention of cervical cancer among rural women. The most common mass media that were used are the radio 306 (98.7%) and television 286 (92%). Seminars and health education were also reported as sources of

information for the prevention of cervical cancer. Moreover, the most useful sources of information reported were health workers 296 (95.5%) and the radio 275 (88.7%).

The findings are similar to those by Kurczewska-Michalak and Kardas (2017) who reported that healthcare professionals along with the television and internet provided most of the information for the prevention of cervical cancer. Furthermore, the findings of this study revealed that social media is another source of information for the prevention of cervical cancer used by rural women. Despite the many social media available, the most useful social media is WhatsApp, identified by 257(83%) respondents. This communicates the fact that health workers, mass media and social media are the most common sources of information used by rural women of reproductive age to access information on prevention of cervical cancer; however, although the internet is a powerful source of information, it does not always provide the most accurate information because some of the websites are not reliable sources (Nelson et al., 2018; Ifemelumma et al., 2019).

Use of Information on the Prevention of Cervical Cancer

The finding in this area showed that respondents reacted differently when it came to accessing information about the prevention of cervical cancer. About 248(80.0%) take precautions as instructed, 52(16.8%) share with others and 10(3.2%) don't do anything (see Figure 7).

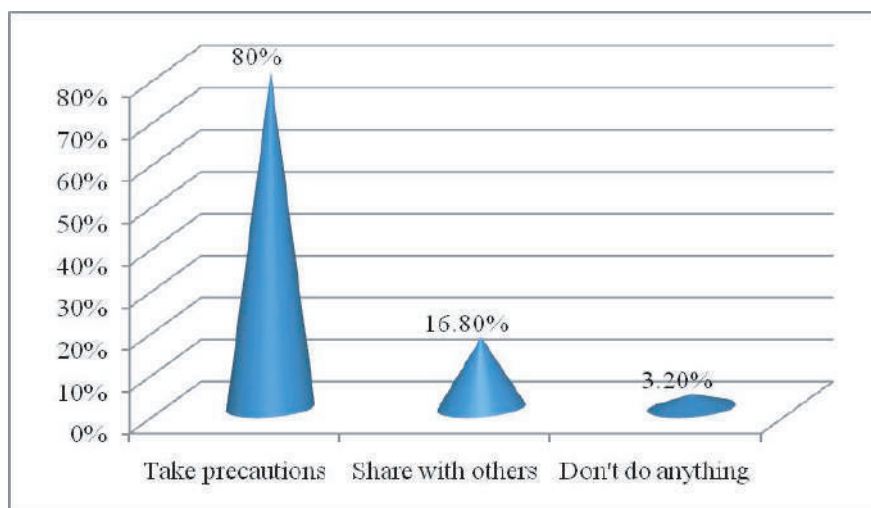


Figure 7 Action Taken after Receiving Information

Source: Field Data, 2021

The findings show that when the majority of rural women receive information about the prevention of cervical cancer, they take precautions by avoiding the risk factors. These findings are similar to findings from a study done in Uganda by Mukama et al. (2017) which revealed that women's attitudes towards the risks of cervical cancer are equally important in information access on the prevention of cervical cancer. Attitude regarding perceived risks to the disease have been suggested to influence the use of information on prevention of the disease and screening procedure (Mukama et al., 2017). Furthermore, a study done by Shea-Budgell (2014) revealed that cervical cancer survivors are keenly interested in receiving information about cancer, despite having undergone or finished active therapy than those who have not yet experienced the disease (Shea-Budgell et al., 2014).

Contrary to the findings of this study, Khazae-Pool et al. (2018) conducted a study in Iran with women of the reproductive age. Ideally all women in Iran age between 35-54 years are aware of cervical cancer screening. However, although the Pap smear test in Iran is free of charge in most health facilities, only a small proportion of eligible Iranian women undertake the Pap smear test, with percentages ranging from 14.8 to 28.3%.

Challenges of Access to Information on Prevention of Cervical Cancer

The findings show that about 221 (71.3%) women of the reproductive age experience challenges in accessing information on prevention of cervical cancer while 89 (28.7%) do not experience any challenges. The findings show that the majority of rural women experience various challenges in accessing information on the prevention of cervical cancer. Apart from experiencing challenges, respondents were asked to identify the types of challenges that they experienced. Findings show that inadequate health facilities 90(44%) and distance from the health facilities 85(85%) stood out as the most serious challenges experienced by rural women in accessing information on prevention of cervical cancer (Figure 8).

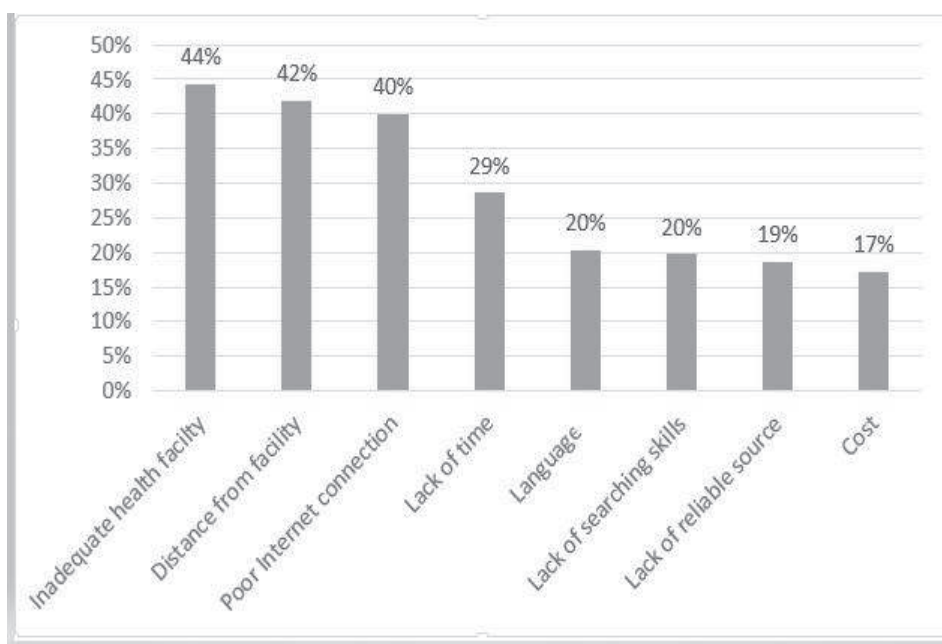


Figure 8: Challenges in Accessing Information on Cervical Cancer

Source: Field Data, 2021

The findings show that inadequate health facilities and distance from the health facilities were the most serious challenges experienced by rural women. Furthermore, during the interviews health workers mentioned several challenges experienced by rural women in the course of accessing and using information on prevention of cervical cancer. These included language, illiteracy and delay of information about the prevention of cervical cancer to rural women. Below are some of the submissions from participants:

The language used to give information on the prevention of cervical cancer is Kiswahili, when we get a client who cannot understand Kiswahili we struggle to speak their language (Participant 3, Doctor).

... for women who cannot read, they must be given information on prevention of cervical cancer through seminars because they cannot read brochures and leaflets (Participant 6, Nurse).

In our area, not all people get this information at the right time; there is also fear about the nature of cervical cancer screening procedure. Lack of education about cervical cancer among the community members is also a challenge (Participant 1, Doctor).

The findings are similar to findings of a study conducted in Peru, which identified lack of access to health care, shortage of quality facilities and laboratories as challenges facing access to information on prevention of cervical cancer (Freijomil-Vázquez et al., 2019). Another study identified low levels of awareness, myths and misconceptions, fear, stigma, and language barriers as challenges which affect distribution of information about prevention of cervical cancer among women (Kisiangani et al., 2019). Furthermore, a qualitative study conducted in Pakistan and Somalia found out there were several challenges for accessing and using information on prevention of cervical cancer. These include cultural norms and beliefs, individual perceptions, existential considerations, language barriers and limited knowledge about HPV and cervical cancer (Gele, 2017). Another study reported that personal barriers such as a lack of knowledge, low self-perceived risk and personal beliefs associated with religion and language issues are challenges in accessing information on prevention of cervical cancer (Grandahl et al., 2015).

Discussion

The findings of this study indicate that the majority of women (83.2%) have heard about cervical cancer and therefore, are likely to be key teachers to other rural women who have not been aware of the disease. There is a need to provide education and awareness campaign to rural women about cervical cancer. Furthermore, respondents acknowledged that Pap smear and VIA are common methods used for cervical cancer screening. Although such information is available, this does not guarantee that all the women have access to information on prevention of cervical cancer, as 16.8% of the respondents indicated that they were unaware of cervical cancer. This relates to the study which was done in the northern part of Ethiopia which showed that 51.9% of the respondents were sufficiently aware about the disease (Ifemelumma et al., 2019).

Moreover, the findings show that the mass media and publications are the main sources of information for the prevention of cervical cancer among rural women. The most common mass media used are the radio and television. Seminars and health education were also reported as sources of information for the prevention of cervical cancer. Moreover, the most useful sources of information reported were health workers and the radio. Kurczewska-Michalak and Kardas (2017) reported that healthcare professionals along with the television and internet provided most of the information for the prevention of cervical cancer. Furthermore, the findings of this study revealed that social media is another source of information for the prevention of cervical cancer by rural women. Despite the many social media available, the findings show that the most useful social media is WhatsApp. This communicates the fact that health workers, mass media and social media are the most common sources of information used by rural women of the reproductive age to access information on prevention of cervical cancer. However, although the internet is a powerful source of information, it does not always provide the most accurate information because some of the websites are not reliable sources (Nelson et al., 2018; Ifemelumma et al., 2019).

The findings further show that when the majority of rural women receive information about the prevention of cervical cancer, they take precautions by avoiding the risk factors that cause cervical cancer. These findings are similar to findings of a study the done in Uganda by Mukama et al. (2017), which reveal that women's attitudes towards the risks of cervical cancer is equally important in information access on the prevention of cervical cancer. Attitude regarding perceived risks to the disease have been suggested to influence the use of information on prevention of cervical cancer and the cervical cancer screening procedure (Mukama et al., 2017). Furthermore, a study done by Shea-Budgell et al. (2014) pointed out that cervical cancer survivors are keenly interested in receiving information about cancer, despite having undergone or finished active therapy than those who have not yet experienced the disease (Shea-Budgell et al., 2014).

Conclusion

This study has provided additional evidence on access and use of information on the prevention of cervical cancer among rural women in Tanzania. From the findings we can conclude that rural women are aware of cervical cancer. The most frequently used sources of information are health workers, social media and mass media (radio and television). Despite the improvement in awareness creation about cervical cancer among women of the reproductive age, particularly rural women, some still experience challenges in accessing information on the prevention of cervical cancer. Furthermore, rural women react differently to received information on prevention of cervical cancer. Some take precautions, some share with others and some don't take any action.

Recommendation

Based on the findings of this study, the following recommendations need to be considered.

- a) More awareness on the prevention measures on cervical cancer should be conducted to women as the findings of the study show that there is a relationship between awareness of cervical cancer and practicing screening and having vaccinated. This should aim to reduce the number of people who die from cervical cancer, or completely eliminate deaths caused by cervical cancer, and reduce the number of women who develop the cancer.
- b) The District Health Management Team (DHMT) in collaboration with the District Councils should expand accessibility of information on cervical cancer prevention through establishment of health information resource centres, training of health personnel, establishing more health facilities that provide information on prevention of cervical cancer and screening services.
- c) The District Council in collaboration with District Health Management Teams should hold educational programmes in order to sensitize and improve access to information on cervical cancer prevention among rural women of the reproductive age.
- d) Seminars with rural women who cannot read should be regularly conducted in order to enable them to access information on prevention of cervical cancer because they cannot read brochures and leaflets.
- e) Radio programmes have been found to be useful sources of information for rural women. Therefore, radio should be emphasized for disseminating cervical cancer education among women. Packaging of messages for cervical cancer should be prepared targeting radio audience like rural women and for sharing information through social media like Whats App.
- f) Rural women of the reproductive age should visit health facilities in order to access reliable and sufficient information on the prevention of cervical cancer. They should

also use reliable sources of health information particularly on cervical cancer. This is because not all women get reliable source information at the right time. Furthermore, some of the women fear about the nature of cervical cancer screening procedures.

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Using E-Mails in Studying the Graduate Employee Organization

Fulgence Saronga S. Swai¹

Abstract

The study investigated the Graduate Employee Organization (GEO) in its political image, and in the process, the grounded theory was used. The participants involved in the study were GEO members who were also graduate students. Digital E-mail correspondence took the bulk of the data, which was later analysed with interviews in order to gain a better understating of the union, given that politics is inevitable in organizational life. There has always been issues of vested interest, conflicts and struggle for power in addition to a number of visible political activities on campus. The literature reviewed enhanced the impression of the political frame as a lens in describing the organization. International students have appreciated the fact that there are no constraints for participating in union matters since the union is a complex organ with students coming from more than 25 different nations, speaking different languages and with diverse cultural backgrounds. Additionally, collegial feelings among GEO members have been enhanced. There are a few GEO members who are working around the clock to ensure that the GEO appeals to the outside world. The study developed six categories of the life of the organization. One of them is the bargaining process, which is the lifeblood of the union as pointed out in the data. The GEO leadership and the stewards work towards creating a viable trade union at the University with the motto "Excellence within your reach." It is to be noted that E-mails and other digital forms of communication have largely replaced letters and memos. Finally, despite its good work, the article has identified some challenges that might need to be addressed in subsequent studies, to make the organization even better.

Keywords: Teacher organization, political lens, post-graduate university employee

Introduction

The attempt by graduate students to unionize went through a struggle, perhaps more of a political struggle than an academic one. Nelson (1997) also noted that in Yale University there was stiff opposition faced by graduate students in organizing for their union. In 1976, the Graduate Student Employees Union filed a petition at the Massachusetts Labour Relations Commission (MLRC) for the desire to have a union. It was not until 1979, three years later, that MLRC turned down their petition, claiming that they were students, and hence ineligible for unionization. This was clear testimony that the graduate student employees were denied recognition as public employees. In the year 2002, this same reason was used, this time by the University of Massachusetts, Amherst to refuse undergraduate Resident Assistants to form a union of their own; and in the same year, MLRC admitted that the undergraduates could form a union. These are the ramifications of the political metaphor in learning how organizations operate under certain circumstances. Schimidman (1979) writing on unions in post-industrial society said that unions are essentially political organizations. It has further been emphasized by Sachs (2013) when discussing about unbundled unions with politics without collective bargaining.

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The time was on the side of the graduate students, and in Fall 1987, Graduate Student Senate (GSS) revived the drive for unionization. The senate found out that work could be done best through a committee. Working through committees has been supported by Dopppler and Lauterburg (2001), Lieberman (1997), Schimidman (1979), and Spring (1993). An autonomous group that became known as the Graduate Employee Organization (GEO) was given the task of coordinating the unionization process. It was not until Fall 1988, that the GEO began to organize graduate employees by staging a number of actions and demonstrations, and including relevant literature in order to gain support for unionization. By 1989, over 50% of eligible employees had signed a 'union' card and agreed to contribute \$1 a week to the campaign. This was no small achievement given the energy involved (Bascia, 1994). Escobar et al. comments:

Critical views of democracy and academic profession predominate. There are discussions about the degree of authoritarianism of university trade unions, the complacency of a conformist culture among university professors, and lack of a truly democratic discussion about the role of the university in the process of change... (Escobar et al., 1994, p.23).

In November 1990, graduate employees voted in favour of unionization and to have the GEO represent them in contract negotiations with the UMass-Amherst Administration. The first contract took effect after a ten-day strike in November 1991. During the strike, the GEO won arbitration, a waiver of 79% of individual and family health insurance, and an agreement from the Administration to fund eight graduate employees to work for the GEO. The organization had its second contract in 1993, which expired in June 1996.

Each graduate employee belongs to a department. Each department needs a graduate student who is a member of the union to act as a liaison person between the union and the graduate students, to be referred to as employees or workers. In a trade union movement, the union representatives have different names. At the University of Massachusetts Amherst, they are called stewards; while in other places, they are called unit representatives of workers. Yet in other unions, they are referred as union organizers at their places of work. Schwartz (1999) writes that the method for choosing stewards is set out in the local union bylaws. In many unions, stewards are elected and in others, are appointed by the union President, executive board or the business agent.

Additionally, the ability of the President to select his or her own administration is an integral part of ensuring a union administration's responsiveness to the mandate of the union. By its very nature, a steward's job may require confrontation (Schwartz, 1999); sometimes this can be done in a calm, straightforward manner, through 'quiet diplomacy'. But on certain occasions the steward may feel compelled to raise his or her voice, to argue forcefully, or to emphasize the union's position on other vigorous ways. Good stewards/stewardesses establish good rapport with their peers as well as the management. The research studied the non-involvement of the stewards at the department/programme level in the formulation of union policies and how stewards developed the big picture of the GEO. The basis of a union is solidarity, common identity and mutual commitment. It all involved the rigour of the political metaphor of an organization. The following is a quotation from the GEO membership brochure:

The GEO is a powerful and progressive voice for graduate students on campus and our strengths come from your involvement.... You can serve

as a departmental steward, keeping your colleagues informed and organizing them to participate in union activities, such as rallies, marches and letter-writing campaigns. You can also become involved by helping with grievances, collective bargaining, running for office, or by serving on a committee (GEO Brochure, UMass, 2000).

Background

The basis of a union is solidarity, a common identity and mutual commitment Nelson (1997). The interests of the union lie in persuading members to believe that they are receiving excellent service for their dues; their interest lies in getting the facts, as noted by Lierberman (1997). The union steward has the big role of providing the information needed. Rothman (1974), using the work of other voluntary associations plays a key role in transmitting community attitudes to individual community residents. These stewards will be taken as key informants, as referred to by Rossman and Rallis (1998). Such people in any group are more informed about the culture and history of their department. The study sought to find out whether the GEO stewards are the key actors of the organizations. In this study these stewards have been referred to as organizers, a view also shared by Nelson (1997).

Juravich and Bronfenbrenner (1999) quoted a former local organizer who said, “We were militant, very militant, but not radical, ... What we wanted was to be treated fairly”. Any union policy in force or in the process of being made by the GEO membership has some bearing on the graduate employees in terms of the fairness harnessed above. Better union policies can raise the status of the graduate student as outlined in the GEO Agreement of 2000. The formulation of policies and their implementation have a better rate of success if the stewards are involved from the beginning of policy formulation.

As in line with the GEO, organized teachers largely concentrated on securing personal benefits and improved working conditions (Alkin, 1992). The picture that emerges from the research is that unions are primarily concerned with members’ welfare and not with matters of policy. This is the gap in the research which has been the focus of the study. Most current researches have focused on effects of unions on teachers’ work, and on school governance and less on policy. Also research has established that unions have not been initiators of new policies (Fuhrman et al., 1988). With the above narration, the statement of the problem is mentioned in the following section.

The problem, purpose and significance of the study

The purpose of the study was to describe the roles of organizing stewards in the GEO. The method of inquiry for the study was the interpretive narrative in order to give a comprehensive description of steward activities. The significance of the study is based on the fact that it will provide heuristic insight that will contribute to general knowledge and enhance the understanding of how union stewards/organizers are unionized. This study will shed light on the roles of stewards/organizers at the departmental level. The GEO are engaged in bargaining for a new contract for Continuing Education Instructors. The organizers will be in a better position to participate in organizing the process. The study will enable the student body as well as the university as a whole to make better use of the stewards/organizers in making university life bearable to graduate students. International students will appreciate that there are no constraints for participating in union organizing, and collegial feelings among the GEO membership might be enhanced to a higher level as hitherto.

Research questions

These questions are meant to be feasible, clear, significant and ethical in the eye of the researcher as emphasized by Rossman and Rallis (1998), and Glesne and Peshkin (1992). Addressing the issue on a more practical level, Fontana and Frey (2000) had the following quotation, which will shed some light on questions. “Asking questions and getting answers is a much harder task than it may seem at first. The spoken or written word has always a residue of ambiguity, no matter how carefully we report or code the answers.”.

Bearing in mind all the precautions on the nature of the research questions, and having gone through the theoretical description of the topic and the review of literature, the following two research questions guided the study.

- i) How are stewards organized? This question has been broken into the following sub-questions: In what ways do the stewards keep their colleagues informed? How are meetings organized at the departmental level where stewards are the organizers? How are the stewards perceived by their colleagues? What kind of support is expected from the GEO office to the stewards?
- ii) How are steward activities balanced with graduate academic work? This question comprised the following sub-questions: What is the experience of the stewards in union organization? How do you feel being called a steward or a union representative or an organizer? How are stewards involved in the formulation of GEO policies? What are the problems being faced by stewards in implementing their work?

Study delimitation/limitations

According to Creswell (1994) delimitations deal with how the study has been narrowed in scope. This study focused on the way the GEO can be described through the political activities of the union. The focus was looking at the areas of conflict and vested interests in scrambling for scarce resources. It also looked at the powers that the union holds as far as being able to lobby and coerce the University to negotiate and benefit from gains which could not be achieved by other unions. This study focused only on the political life of the union.

As for the study limitations, although the union has a lot in common with a teachers union, it has served as a pilot study for mounting a bigger project for studying teacher unions. The study could have taken longer if time was adequate, to do more interviews and more documentary analysis. The data could have revealed more about the union if the study had looked at the financial life of the union, which was not the intention of this study.

Related literature

As mentioned in the introduction and background, there has been incidents of vested interests, power, conflict and political activities appearing sparingly in the text. All these connote the value of the political image of the organization. By describing the organization using the political lens, a lot can be learned as it has been noted by Morgan (1997), that politics is an inevitable aspect of organizational life. The literature reviewed has further enhanced the impression of the political frame in narrating the organization as discussed in the following sections.

GEO as an organization

The GEO is an entity and therefore subject to organizational studies. Clegg Hardy and Nord (1996) have the premise that organizations are empirical objects. The GEO is seen as an organization with loose and porous boundaries within the university. A theoretical imagination leads one to believe that there is a fragmented organization and management structure both within and impinging upon the university and other institutions. This argument is supported by Bush (1995) who writes that “management is a continuous process through which members of an organization seek to coordinate their activities and utilize their resources in order to fulfill the various tasks of the organization as efficiently as possible.” It is in this light that the union cannot be described using Max Weber bureaucracy or machine management or the Taylor scientific management as supported by Calas (1999) who by quoting others, she has argued that deconstructing the organization is an excellent approach in organization studies. This meta-narrative would enable the researcher to give a thorough description of the union.

Development of GEO as a union seeking bargaining rights

The graduate student employees first attempted to conceive the idea of a union in 1976 so that it could negotiate for better services to its members. That attempt ended in 1979 with a ruling by the Massachusetts Labor Relations Commission (MLRC) that graduate employees were metaphorically students and therefore denied recognition as public employees with the right to unionization. The GEO never gave up. In 1979, the GEO used its strength of numbers to force recognition from the University. At the same time the GEO took cover under the United Auto Workers (UAW) union to strengthen its muscle. In 1989, the GEO organized a strike on budget cuts and the strike got the support of more members joining the union. The concept of budget as a symbol of responsibility is well noted by Czarniawska (1997) where budgeting is a game of status maintenance, in which one side is for growth and the other side is for cuts. The GEO has always been against cuts.

The GEO is a dynamic and a complex organization

The GEO is one of many parts of the university as Bush has noted through the use of others; there is the suggestion that:

Within the university, there exists several subcultures each seeking to promote and maintain its values. ... the university requires that one deals with the web of conflicts and tensions which exist as several subcultures try to protect their way of life (Bush, 1995 p. 132).

It is in line with this quote that the best way to study the union was the use of the narrative approach. The GEO has a diverse membership, with graduate employees in more than eighty departments across the campus. It is thus a complex species of its kind with students coming from more than 25 different nations, speaking different languages and with diverse cultures. This kind of scenario creates a dynamic turbulent environment as it has been noted by Morgan (1997) that some species survive better than others. Noting the work of Mintzberg as highlighted by Bolman and Deal (1997), the GEO cannot be identified as a machine bureaucracy, nor the divisionalized form, nor the simple structure but as the one of adhocracy. Whenever the graduate employee is doing work, the union benefits the student. It is imaginary in the sense that when the student is working, he or she does not see the GEO as having played a part in creating the conducive environment. It is when the student gets a work related problem, that the GEO becomes

real; when the student is being victimized, that is when the GEO comes to the surface in his or her brain seeking welfare support.

The challenges of the union

The organizational reality of the GEO is difficult to comprehend. The GEO members are de-facto members of the Graduate Student Senate (GSS) and yet the GEO is more vocal and has more visibility on the campus. These two bodies have different functions but all have almost the same members with the GSS having even members who do not pay dues to the union. The GSS is like a governing body for all graduate students. No one can say that the GSS has power over the GEO but there is interconnectedness in the way these bodies work.

The shortfall of the political lens

Morgan (1997) argues that there is no current theory for everything. This is further augmented that organizations are many things at once, as organizations are complex, multifaceted and paradoxical. Any metaphor can be used to make us see the organization better and also can be used to blind and block us in seeing the organization. The following questions might be posed, “How do we handle the elite and gate keepers who follow the concept of subordination where they block new theories to replace old theories?” Why is it that employers will always oppose legitimate workers to form trade unions? What kind of pleasure do they get, even spending public finances to fight unions? The following is just to show the feeling of others on a similar matter.

We find the idea of a hierarchy in organizational science, coupled with the notion of a system of elites from the “best” schools, to be offensive. ...would be to protect their positions by denying the existence of evidence that challenges their views and by undermining the credibility of those whom they cannot control (Hauge, 2000, p. 168).

Design and methodology

The study has sought to remedy some of the conceptual and methodological problems noted above and the research method was found to be the interpretative narrative approach. The advantage of this method is that the researcher gave a thorough description of what took place in the organizing of stewards, a phenomenon noted by Marshall and Rossman (1989). The disadvantage of this method is that the researcher had to conduct an in-depth interview, an elite interview, an observation session, and did documentary analysis.

The description of the conceptual framework

Participant observation provided the opportunity of acquiring the status of a ‘trusted person’ and this person is the participant observer. By being part of a social setting, one learns first hand the actions of others corresponding to their words; sees the patterns of behaviors; experiences the expected and the unexpected and develops quality of trust that first hand the actions of others corresponding to their words; sees the patterns of behaviors; experiences the expected and the unexpected and develops quality of trust that

motivates them to tell what otherwise, they might not have said. The arrow in the schema indicates the position of the participant observer in the observational methods.

Using the schema in Figure 1, the participant observer is ranked low on the behaviour to be used in the research and also the degree to which the researcher structured the study are low.

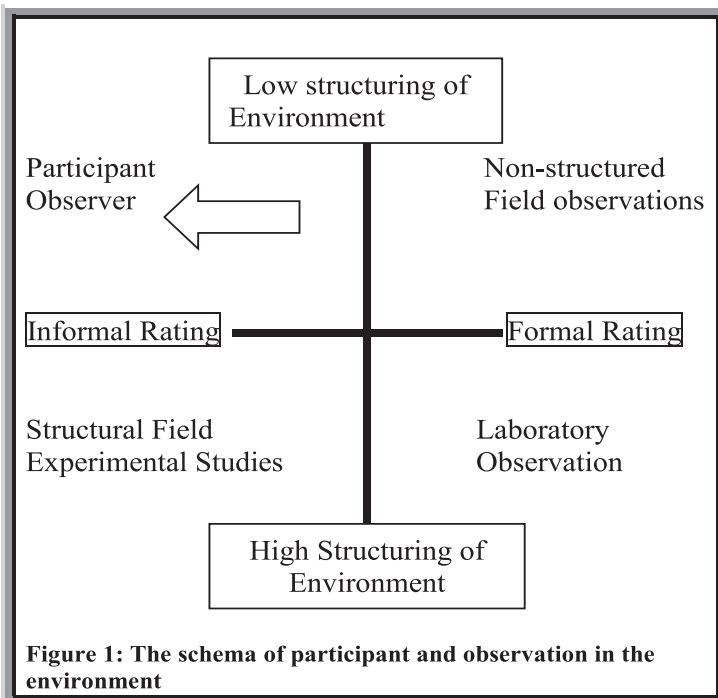
Using this method, the researcher was fully involved in the day-to-day functions of the union since he was a Graduate Student who had the privilege to attend in all the activities of the union. Before conducting the study, he met the union leadership for the permission to conduct the study. The following were the observed activities.

The frequency of meetings, how the meetings were conducted, how the minutes were distributed, who wrote

the minutes, the time taken to circulate the minutes of the last meeting and how the minutes were stored both in hard and electronic copies. He participated fully in picketing, hockey games, football, participated in pubs, sharing meals in the Bluewall and in the cafeteria and many other events where the stewards were involved. In addition, he developed the following guiding questions for the study.

How are stewards organized? The question was broken further as follows: In what ways do the stewards keep their colleagues informed? Do they make use of the e-mail facilities? Are they involved in informal gatherings? How often do they correspond to each other? Are there some members who are cut off from the communication of stewards' discussions? How are meetings for stewards organized at the 80 departments of the University of Massachusetts? How do the stewards balance their academic work and their role as stewards? What is the experience of stewards in organizing union work? How are the stewards involved in the formulation of the union? What are the problems being faced by the stewards in their daily activities?

In addition to the observation, interviews were conducted for some specific questions where the data from the observation did not give adequate clues of what was being studied. The data from the e-mail correspondences formed the main bulk of the data. These questions and others, which were framed in the course of the study guided the researcher as a participant observer to conduct the study. In the study, the researcher was part of the community of the graduate body. The limitation was that he might have had



his own bias and perspective, which might have prejudiced the study. However, he always tried as much as possible to remain objective.

Description of the population of interest

The population was purposively selected, and collection of data was done as follows:

- i) The elite interview was conducted to the organizer of stewards' meetings
- ii) The interviewing was conducted to two stewards
- iii) Observation was done in the stewards' meetings, and in the general membership meetings.
- iv) The main source of data was via documentary analysis through e-mail correspondence and interactions
- v) The top leadership of the union was consulted directly and informally from time to time as the research was in progress.

The strengths and weaknesses of the design

Both interviews enabled the researcher to write the narrative part of what existed in organizing the union. In order to avoid any bias, this activity was done at the end of data collection through e-mails. The greatest advantage was that the elite interviewee enabled the researcher to reshape the "common sense" about union organizing as noted by Michelle et al. (2000). The in-depth interview was done to two of the most active stewards for a limited time of thirty minutes each. The advantage was that it was possible to determine why these stewards were so active in the union organization. The disadvantage was that the researcher did not get the picture of those who were not active. The observation technique was done during stewards' meetings. The advantage of the method was that it was possible to get the tips of union organization, which were called "icebergs²". By noting the icebergs, it was possible to make inferences of what was hidden beneath the sea of the steward organization.

Data gathering procedure

As noted above, each instrument has been described with its strengths and its weakness. The three instruments were chosen so that in case one failed, the other one would give adequate data. Also the three instruments - elite interview and the in-depth interview, the documentary analysis of e-mails, and the observation instruments - were analysed against each other in order to synthesize the data for rich analysis. The documentary analysis took data from the e-mails that was being communicated to the general public. The observation had the purpose of finding out the reality of the political process in action, in terms of negotiating for vested interests as well as the scramble for scarce resources.

Data analysis approach

There were three stages in the processing of data. First, there was description of the data for each question, the second stage was the analysis part, and the third part was interpretation. In all the three areas, the focus was how the political paradigm could be used to describe the union and what theory could come out in using the grounded theory to recount the union. The three phases of description, analysis and interpretations were actually mentally overlapping, but for the researcher, it was easier to document the process and create a visual analogy in describing the organization. Pseudonyms were used

² An iceberg is a term coined that behaves like an indicator that tells the story that there is something to dig for by looking for more information. As the English idiom claims, someone is smelling a rat for something that looks fishy or something that there is some hidden message. It was the responsibility of the researcher to find the larger part, which was hidden, under the sea of steward organizing.

instead of names of the participants in writing the research study so as to maintain the ethical aspect. Unanticipated material that came from the study was highlighted.

Trustworthiness and ethical considerations

The researcher explained in detail the aim of the study and that it was of use to the community. Each one was allowed to participate and also allowed to withdraw from the research. The study was conducted with sensitivity to politics and setting (Rossman & Rollis, 1998). The consented form was developed so that the research was done in an accepted professional manner at the university. Christian (2000) argues that in value-free social science, codes of ethics for professional and academic associations are the conventional format for moral principles. As stated earlier, about informed consent, the researcher also did not fall under the trap of deception. Indeed, privacy and confidentiality were maintained. Finally on this matter, accuracy of data was given maximum attention. All fabrications, fraudulent materials, omissions and contrivances, which are both nonscientific and unethical, were avoided completely in the study in order to consider the study as being moral.

Findings and discussion

This part of study starts with the organizing for each question, narrating the untold story. The second stage is on observation, followed by coding of the data and the third part will be the interpretation pertaining to the grounded theory of the data with a rich visual presentation.

Having collected the data, the task of piecing together an account of events embraced by the research problem was done as noted by Cohen and Manion (1985). This process demanded imagination and resourcefulness. The analysis was guided by the paradigm of narrative interpretative, which is naturalistic (Lincoln (1985) and as a way humans experience the world (Merriam, 1998). Every utterance and every noise were taken as data. Patton (1990) added that to observe that elephants have no wings was indeed data.

The analysis was developed as the way engineers build a tarmac road and reach the end with a full-macadamized road. The researcher's focus was to discover something as data was mingled with primary and secondary information. The presentation of qualitative data and the narrative interpretation were meant for enlightenment use, and for crystallizing the GEO values and for transforming structures and practices for the better (Rossman & Rallis, 1998). As qualitative research is quintessentially interactive, the data is being presented in the manner it has been collected, bearing in mind the researcher's own epistemological assumptions and without flirting with perspectives.

Findings from organizing and observation

The questions were grouped into two thematic issues; the first one was on organizing and the second one was based on how graduate students balance their academic work and academic labour on union stewardship. The questions on the theme of organizing were as follows: i) In what ways do the stewards keep their colleagues informed? ii) How are meetings organized at the departmental level where the steward is the convener? iii) How are stewards perceived by their colleagues? iv) What was the experience as an organizer? These questions are elaborated in the sections that follow.

In what ways do the stewards keep their colleagues informed?

The stewards kept their members informed through several ways. The e-mail was the major means of communication, followed by departmental meetings, rallies, picketing, informal discussions among the members, assembly of stewards' meetings and the entire GEO membership. Of late however, there has been an over use of the e-mail. The following quote is evidence of how members feel about the e-mail forum.

I'm extremely uncomfortable with making anybody feel like they have to give a blow by blow description of an upsetting event over a list-serve. I understand and agree that there are serious charges with serious consequences, but I feel we can let democracy take its course without email-testimony. When anybody files a complaint about being harassed, they need to know that they will be protected from unwarranted scrutiny. Many situations do call for airing of evidence, but not in this forum³, please.

Meetings

In one of the meetings for the entire membership, which the researcher attended as an observer, there was a disagreement and the meeting ended prematurely. After a few days one steward wrote the following to the rest of the stewards.

One idea we had was about having a more structured format for discussion ... at the next membership meeting, to avoid the chaos and acrimony that engulfed the last one. Something like two minutes per speaker, with no responses; speakers in an order determined by lot; secret ballots; etc. I'm not sure how such departure from our normal rules would be put into effect - I suppose the membership would have to vote on it (written by one steward).

After the meeting which ended prematurely, a lot of e-mails circulated across the campus, while some expressed their anger on paper. The debate by e-mail was intense and the language was hard. One e-mail was written as follows: "Your e-mail is a wonderfully written message, well-articulated and the impact is more strength for the GEO. It was a blessing in disguise that what happened took place at the early stages of the bargaining process instead of taking place at the last stages."

Observation

Before doing the actual observation the researcher had prepared ten items for observation. However, due to pressure of time, only a few items were be dealt with, namely e-mail correspondence with stewards, membership meetings and other union activities that were operational during the research time. It was found that e-mails and other digital forms of communication had largely replaced letters and memos, thus substantiating the keen use of e-mails. These were the focus areas for observation. It was participant observation as noted by Patton (1990) which is an omnibus field strategy. It simultaneously combines document analysis, interviewing of respondents and informant, direct participation and observation and introspection. It enabled the researcher to make sense of what was heard and seen as reflected by Rossman and Rallis (1998) for more tacit knowledge or deeper understanding.

³ In this case, the forum is the e-mail where there had been accusations on matters related the use of some language that had not been favorable to the viewers of union e-mails.

What is your experience as a union organizer?



Figure 2: The GEO continuum in steward organizing as viewed by author.

The feeling was that the organization was somewhere in the middle of the continuum as shown in Figure 2. Getting information from the main office of the administration has been very interesting for stewards. For example the following narration came from a graduate employee.

... trustees have kept tuition and fees the same or lower each year for the last six years, seeking to ensure more residents can afford to attend UMass. ... raising student costs is currently politically unpopular and impossible to achieve right now. But within in another year or two I believe it will happen. Nevertheless... keep pressing the state for increased funding, and to continue searching for sources of outside revenue... think about how to accommodate more than \$20 million likely to disappear from academic and administrative budgets over the next 10 years, and approximately 500 faculty retiring over that period. You must keep the pressure on, unpopular though it is that the Commonwealth of Massachusetts needs to invest, not to make up for the fairly substantial funding that they have been pulling for the last six or seven years, but to make up for the cumulative effects of historic deficits at the university for 28 years. There is a serious shift going on at this university. There is ... no time to lose.

There could be some grumbling; however, certain basic information is needed for keeping members abreast of what is happening. This is a gray area for further research. Bolman and Deal (1997) noted that organizations are complex, ambiguous, surprising and deceptive. The GEO seems to have all these characteristics as an organization.

Findings towards the Grounded Theory

To underscore the distinction between analysis and interpretation, it may be helpful to distinguish between key terms and word pairs. The term “analysis” has included such terms as cautious, controlled, structured, formal, bounded, scientific, systematic, logic-deductive, grounded, methodological, objective, particularistic, carefully documented, reductionist, impassive. The other term “interpretation” is associated with words like freewheeling, casual, unbounded, aesthetically satisfying, inductive, subjective, generative, systemic and impassioned (Walcot, 1994). After having gone through the massive single words identified, the phrases, the properties and their dimensions, and having tallied the words that are similar or identical, plus the task of finding their relationships they could be organized into the following six broad categories: involvement, bargaining, chaos, frustration, abuse and positive change. These categories are elaborated in the sections that follow.

Involvement

Under involvement there are three gadgets, which are programmes, plan and dialogue. The involvement of stewards as a category is related to three properties namely programmes, GEO plans and dialogue. The programmes need facilities to conduct research in the departments where GEO members are employed. In doing their work, they are doing research and the belief is that the University is investing in order to rip off large profits by employing students who are paid less compared the real professionals. These activities are being organized and supervised in the academic departments. These departments need support to recruit and bring some degree of homogeneity in the programmes. These departments write administrative letters to students informing them of being awarded with assistant ships. These students can be foreign, taking MA/PhD or other flexible programmes.

The plan as noted from the data, did indicate a number of issues. The GEO members wanted evidence of a plan of action to be executed and updated; members refer to these as pocket updates. They wanted to see a schedule of meetings and union activities planned on a daily basis; they also would like to see the events for the whole year or semester planned in good time. They wanted rallies and functions to strengthen the union.

Dialogue is normally the political life of the union. Issues of diversity, forum and bad politics are mentioned in the data. Open minds, democracy are values in the union. Voice of members, participation and a clear line of communication were valued. The current university budget cuts forced the union to hold a dialogue on what to do. The question as to whether, the GEO is radical or revolutionary are issues that could be discussed during union dialogues. Feelings of colligability also feature in the process of dialoguing.

Bargaining

In the category of bargaining, there are three axial elements: funding, process and timing. These three elements depend on each other. Wrong timing of events, lack of funding, and lack of processing of important issues tend to develop the third, fourth and fifth categories. As Hughes et al. (1973) noted, collective negotiation is a new force that has been emerging in American colleges and university campuses and they do claim that it wields an impact upon everyone involved in higher education. The strength of the union depends on good contract, good leadership and enforcement of bylaws and abiding by the constitution.

Chaos

Under chaos, we there are the axial branches of conflict, confusion and departure from normal rules. There have been also personal attacks, crazy membership, grievance breakdown, messing up of issues, and disconnected membership. Despite all these, the GEO still stood strong. On the one hand chaos can be positive, while on the other hand, chaos can be destructive.

Frustration

Under this category, we have three tenets: negligence, cancellations and university shift. There was a group of people who used e-mails, endermine others and to develop what one of the e-mails baptized as 'second hand allegations'. Attached to the allegations, there was a mention of financial malpractices in the late era of the union. Leadership cancelled meetings, which led to a lot of frustrations. These cancellations made the leadership at some point unpopular as findings indicated. Despite all these frustrations

and bureaucracy, the GEO has survived (Hallinan, 2000, p. 65). The consensus theory is able to explain how social systems operate in a state of equilibrium and how such systems respond to challenges and come to a stable state.

Abuse

Abuse has been characterized by harassment, investigation allegations and participant withdrawal. This was notable in one of the membership meetings where a lady had not been addressed properly, and that incident made other people avoid membership meetings that were held thereafter. It has been difficult to describe the nature of the abuse, whether it was personal or general.

Positive change

The study has been found that there is positive change. In one incident, the interviewee said, “organize“. Under this category, we have four sub-themes, namely, solidarity, elections goals, and organize, as seen in Figure 3.

Under solidarity, the GEO has to organize itself as a trade union, as noted by Chakraborty and Bhattacharya (2001). There are roles to be played and respect has to be accorded to defend the rights of the graduate student employees, as workers. Lipset and Galenson (1960) have remarked that the internal organization and operation of most labor unions closely resemble one-party states than they do democratic organizations with legitimate and organized opposition and turnover in office. This pattern is so common in the labour movement; and in dealing with local unions, there has to be an administrative system with defined patterns of responsibility and authority. Issues of authority are handled differently by excellent captains (Weick, 2001). The researcher’s personal experience is that there are three elements in good governance in trade unionism. These are i) asking important questions at the right time, to the right people, and in the right place; ii) financial and well-audited reports that are all beyond reasonable doubt authentic; and iii) proper and timely elections conducted at the appropriate time within the constitution.

The GEO goals though known to the leadership, need to be known as well to the membership. The message that ‘united we stand’ and the goals of professional discipline need to be injected in the union. Traditionally, the fundamental purpose of trade unions is to promote and protect the interests of their members (Armstrong, 2001). Nelson (1997, p. xi) writing on “Will teach for food: Academic labour in crisis” argued that in a university, something even more sinister happens. Out of the 2,500 members, only about 100 graduate employee students attended meetings, although any decision arrived at, affected all those who attended the meeting and those who did not come to the meeting.

Suggestions for further study

Having done the research and seen the gaps, another study could be conducted to respond to the question, “How are the issues of representation and form implicated in sustaining power relations behind the theories and our institutions?” This questions could be a catalyst for carrying out the study which would describe the GEO using the political metaphor.

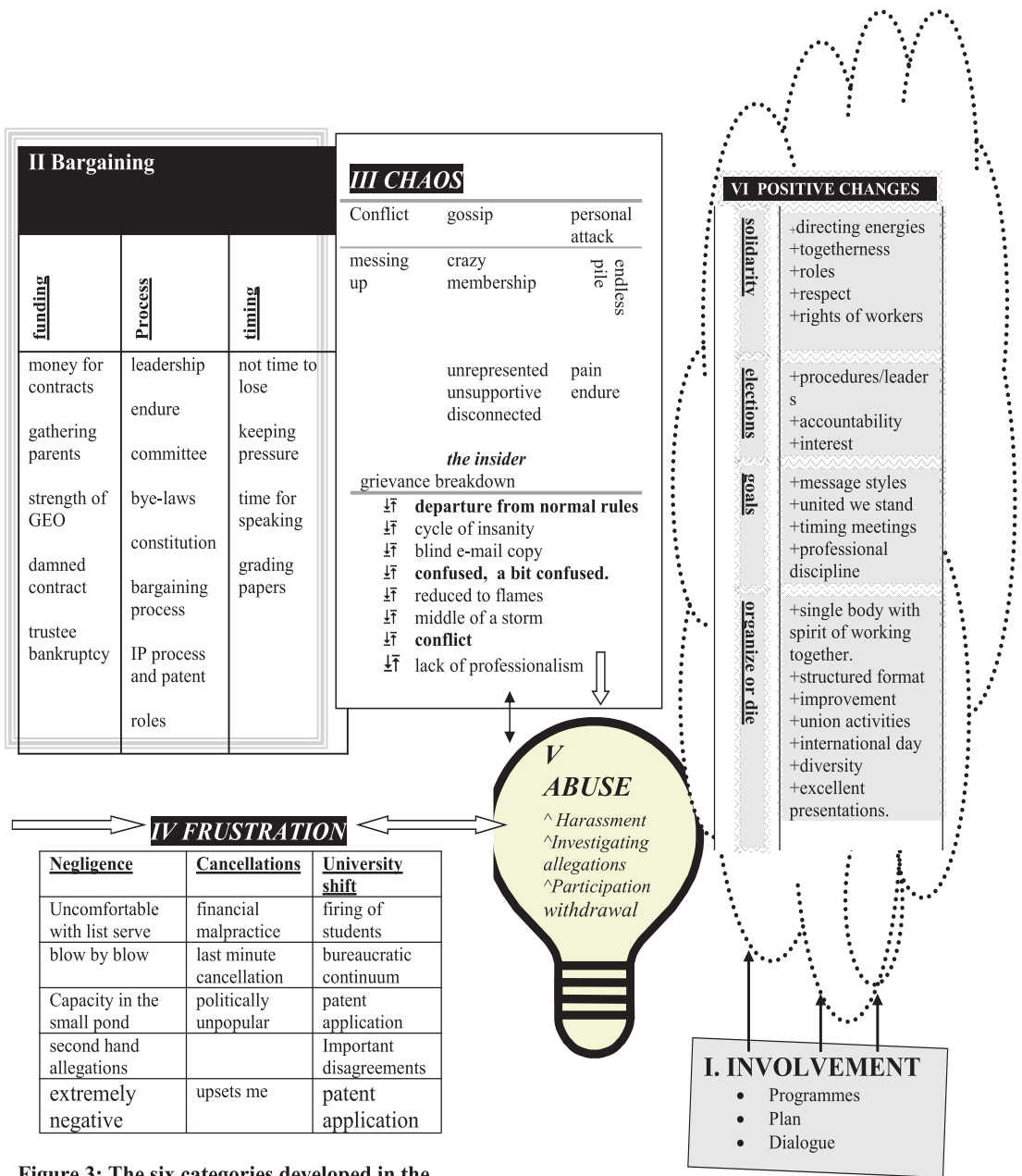


Figure 3: The six categories developed in the analysis

Conclusion and Recommendations

The study was undertaken at a time when there were a lot of GEO activities. There were a number of rallies, demonstrations, distribution of flyer and many other GEO activities. This is an indicator that GEO is quite alive. A lot needs to be done for each department to have regular and well-coordinated meetings by the stewards. Out of 80 departments, only a handful of stewards have been elected; So there is a need to have stewards for all the departments. The author believes that the future of the GEO lies on the stewards and good future leaders for the GEO will come from them. The study was able to find out that the GEO has done a great job through the few stewards who are committed to the course of the union. There are a few GEO members who are working around the clock to make the GEO the way it appears to the outside world. The GEO has a network that enables it to help other students like undergraduates in forming a union of their own.

A graduate employ organization can relate to higher education institutions in several ways to foster collaboration and create mutually beneficial relationships. The organization can establish internship programs in collaboration with higher education institutions to students by providing practical work experience and exposure to the industry. The organization can conduct recruitment drives on campuses to identify and hire talented graduates. This could involve participating in career fairs, organizing company presentations, or conducting interviews and assessments on campus. It can also share industry insights, provide practical knowledge, and offer career guidance to students, bridging the gap between academia and industry, ensuring that students are equipped with relevant skills and knowledge. The organization can establish connections with alumni from higher education institutions by hosting networking events, mentoring programs, or alumni panels.

Overall, by actively engaging with higher education institutions, a graduate employ organization can establish strong relationships, enhance their employer brand, access top talent, and contribute to the development of a skilled workforce. Additionally, these interactions can help the organization build relationships with potential future employees and can showcase their opportunities in providing information about job openings, and recruit talented individuals. It is, therefore, important for the graduate employ organization to establish open lines of communication with higher education institutions and maintain an ongoing partnership.

Consciousness is the interface between the world outside of us and the world inside of us. As those with the privilege to lead this union, we need to plan a way to bring these workers together. Plan, plan, plan - and then do, do, do!!! ...I might suggest, on a positive note, that we will not be able to diversify our union until those who have been given the responsibility to lead and care for the union take charge and organize. Until and unless we reach out systematically to our membership and find ways for them to become involved, our union will continue to feel gagged. One steward commented that as long as people walk into our office and walk out feeling neglected, togetherness will be impossible, and this can be achieved through conscious practice. The following four recommendations would help ensure a health union.

- i) There is a dire necessity to have a deliberate balance of male and female stewards as organizers in the departments.
- ii) Graduate students need to feel that the union exists for them and that there must be social gatherings that build familiarity and cohesiveness in the running of the union.
- iii) The use of e-mail in correspondence is ideal; however, the e-mails must use acceptable language to cement the warm relationships of solidarity among the GEO trade union movement.
- iv) The union needs to have a well-accepted format for conducting membership meetings as well as known norms and rules to be followed by everybody in the union for good organizing before the meetings.

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