

**PUBLIC RELATIONS AND EFFECTIVE COMMUNICATION
BY SELECTED RESEARCH INSTITUTIONS IN UGANDA**

BY

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**A THESIS SUBMITTED TO THE COLLEGE OF HUMANITIES AND SOCIAL
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AWARD OF MASTERS OF SCIENCE DEGREE IN MASS COMMUNICATION
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May 13, 2019

DECLARATION

I declare that this research thesis is my original work and has not been presented for a degree or any other academic award in any university or institution of learning

Signature:.......... Date:.....13/5/2019.....

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APPROVAL

I confirm that the work compiled in this thesis report was carried out by the candidate under my supervision.

Supervisor

DR. AWOBAMISE AYODEJI

Signature:.....

Date:.....

DEDICATION

To my lovely mother Ms. Namata Grace.

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LIST OF ABBREVIATIONS AND ACRONYMS

- ABC** – Australia Broadcasting Corporation
- ANC** – Africa National Congress
- CSO** – Civil Society Organisation
- GMO** – Genetically modified organisms
- MUSPH** – Makerere University School of Public Health
- NCRI** – Natural Chemotherapeutics Research Institute
- NGO** – Non Governmental organisation
- PR** – Public Relations
- UNCST** – Uganda National Council for Science and Technology
- UVRI** – Uganda Virus Research Institute

ABSTRACT

This study aimed to find out how research institutions in Uganda make use of Public Relations tools to communicate with their publics and whether those tools have made communication more effective. Using a mixed method approach, qualitative data was collected first through interview guides with a select group of researchers (scientists) and public relations practitioners at Makerere University School of Public Health, Natural Chemotherapeutics Research Institute and Uganda Virus Research Institute. The purpose of collecting qualitative data first was to get expert views, perspective and ideas on Public Relations and nature of public relations being practiced therein. The information obtained here aided the designing of the questionnaire. Using Slovene's formula, a sample size of 400 respondents from the districts of Kampala and Wakiso was obtained for the study. Data was computed using Statistical Package for the Social Sciences (SPSS) 2015 version to get frequencies and descriptive data. The results indicated that majority of the respondents believed genuine engagement with researchers was crucial to ease understanding of scientific findings. Most of the respondents relied on mass media as a primary source of information with the internet following closely especially among the youth. Most respondents preferred interacting with the researchers through community meetings to mass media talk shows. Majority of the participants indicated to have participated in a research project in the last one year. Most respondents believed literature provided by the research is not easy to understand. It was therefore concluded that the three research institutions hardly dialogue with their target audiences, thus hindering Public relations effectiveness because the message is not received as intended. It is the recommendation of the researcher that the three research institutions should consider adopting the usage of the internet especially social media in combination with radio when communicating with the general public.

CHAPTER ONE: INTRODUCTION

1.0 Introduction

Would the world be a better, or even a different, place if the public understood more of the scope and the limitations, the findings, and methods of science? The Bodmer Report (1985), attempted to answer this question and suggested that if those in positions of responsibility had a better understanding of what science and technology can achieve, British industries would be even more competitive. A better understanding of science would significantly improve the quality of public decision-making because decisions made in light of an adequate understanding of issues are likely to be better than decisions made in the absence of such understanding. Public Relations (also known as public affairs especially in civil service) practitioners in scientific institutions by virtue of their positions, are expected to contribute to society by developing relationships with the target publics and foster an understanding and support to science by helping to align scientific studies with the needs of society (Gruning & Gruning, 2001).

This chapter will deal with the Historical background of the study, Theoretical Perspective, Conceptual Perspective, Contextual Perspective, Problem Statement, Purpose of the Study, Research Questions, Hypothesis of the Study, Scope of the Study and Significance of the Study.

1.1 Historical Background to the Study

When European settlers arrived in Australia in the eighteenth century, harsh conditions welcomed them: the soils were poor that crops refused to grow, the seasons were strange, the climate was difficult – this was the earliest driver to science communication. Scientific inquiries were made and phenomena explained to the public so they could adapt to the new environment. In 1945 as the Second World War waned, President Roosevelt posed a question to Vannevar Bush, the Director US Office of Scientific Research and Development: “we have seen what science can do for us in war, but what can science do in times of peace?” Bush explained that science could mean more jobs, abundant crops, higher wages, improved standards of living and assured means of defense against aggression. The war changed everything. In Australia, as in other countries, new

industries emerged, employment patterns shifted and people moved to towns. Soon after governments set demands that restricted scientists from discussing their findings on either commercial or military basis. The post-war government and industry protected their scientific findings from getting into the hands of their competition. However, this position was vehemently challenged by many scientists including David Rivett who viewed these restrictions as an impediment to the free exchange of ideas. David and the like mind were soon labeled unreliable by politicians.

Years later, three interest groups emerged: the politicians needed to justify the astronomical expenditure in science. The scientist had to communicate the benefits of their studies to prepare people for imminent change and also pitch for more funding. And the public needed to know funds were wisely spent and feed curiosity. This saw the establishment of the Radio Science Unit to elucidate and popularise science by the Australian Broadcasting Corporation (ABC), science museums later cropped up and Universities are presently churning out specialists in science communication (Toss & Jenni, 2017).

Heather, Marina, and Neilus, (2016) reveal that researchers at the National University of Science and Technology in Zimbabwe prioritize peer communication and pay little attention to the public, policymakers, and popular media. However, they are quick to point to lack of communication incentive by the university and censoring sensitive findings as constraints to researchers' interest in engaging with the public. Consequently, from this study, seventy-three (73) percent of the researchers at the university preferred communicating through conferences, with seminars following closely at 69 percent. General public platforms like the media were the least favored. However, a more recent study blames colonial and repressive regimes for the sluggish take-off of science communication. Plessis (2017), partly blamed the colonial and apartheid political systems in South Africa for importing a westernized science culture that led to the neglect of a comprehensive approach to the field of science communication. She indicated further that scientific knowledge was exclusively shared amongst the ruling elite class, excluding the indigenous communities. For long, studies were conducted in the interest of the minority ruling class over majority citizens, therefore, it is only of recent that studies are being conducted to overcome animal and plant diseases affecting the locals and also assist exploitation of the natural resource.

According to Plessis (2017), while promoting modernity, the Afrikaners used professional associations, museums, botanical gardens, transport and communication systems as part of their political substructure. Press freedom was stumbled upon when the government prohibited the publication of information on atomic energy. The penalty for the contravention was a fine of up to R10,000 (£5,000) or twenty years in prison or both. However, with the coming of the African National Congress (ANC), the science and technology policy was altered through its South Africa's Green Paper on science and Technology. Efforts by the National Research Foundation and the South African Association of Science Agency (SAASTA) were introduced to promote science in schools, host science competitions and programmes. The ANC government in furtherance established science communication within the university system and appointed two research chairs on science communication. The Department of Science and Technology in 2014 introduced a framework on science engagement with society to improve livelihoods by getting scientists to communicate with the public(Hester,2017).

The Uganda National Council for Science and Technology ACT does not fully empower the Council to take lead in communicating science with the general public. Function (b) of the ACT instructs the Council 'to assist in the promotion and development of indigenous science and technology...', while function (f) encourages dissemination of research findings through seminars, workshops, and journals (UNCST ACT, 1990).

Genetically Modified Organisms (GMO) research in Uganda started in 1992, and by 2015 six crop varieties had undergone modification to address a number of challenges, for instance, to address climate change shocks, maize has been modified to thrive during periods of drought. This means communities that are perpetual victims of harsh weather and hunger can alleviate food shortages. The popular apple banana has also been fortified with vitamin A and Iron; meaning pregnant women and child children will no longer experience such deficiencies because the bananas are easy to access and government can save money from the health budget. In other words, the GMO's can help enfeeble hunger and disease (Zawedde, Gumisiriza, & Tibaasanga, 2015). However, a number of civil society organizations (CSO) have come up in arms against the introduction of GM crops in Uganda alleging they are harmful to humans and that they cause cancer. In February 2015, Action Aid Uganda an NGO with interests in agriculture embarked on an aggressive campaign against GMO's, claiming to eat such foods could cause cancer (Ricketts, 2015). Farmers

who are the ultimate beneficiaries of this technology have stayed away from the GM debate because, most probably, they lack the basic information on the technology. Information from the Uganda Biosciences Information Centre (a body in-charge of agricultural biotechnology communication) is available only in form of factsheets on their website and the research centers. Had there been a form of dialogue with farmers perhaps the situation could be different – maybe NGO's like Action Aid Uganda would not misconstrue facts the way they did.

Theoretical Perspective

The Systems Theory was propounded by Ludwig von Bertalanffy and William Ross Ashby in 1954. The major argument herein the environment can either or not affect the operations of an organisation. If the environment affects the way an organisation operates then is said to be open, however, if the organisation is not affected the environmental factors then it is deemed closed. A system is a set of distinct components that together form a complex whole. The system can, therefore, be closed or open. Organizations are said to be using a closed system if they do not value feedback, and public opinion is inconsequential. Public relations managers in a closed-system concept practice the press agency/publicity or public information models. A closed system requires the efficient production of quality information material without worrying about the impact of their work. An open system, however, relies on feedback loops to improve products and establish lasting relations with their stakeholders. This system is useful in managing either two-way asymmetric or two-way symmetric public relations, both of which are designed to help the organization deal with its environment (Gruning & Hunt, 1992). The theory is relevant to this study because it is from understanding the kind of systems at research institutions that the researcher appreciates the nature of public relations presently deployed by research institutions.

The Social Penetration Theory is a communication theory developed by psychologists Irwin Altman and Dalmas Taylor in 1973, the theory states that relationships begin and deepen through self-disclosure. In the beginning, people establish relationships by disclosing many simple, harmless facts about themselves through small talk. It describes the process of bonding that moves a relationship from superficial to more intimate. Altman and Taylor described the process of self-disclosure as peeling back the layers of an onion (onion model). The onion metaphor is useful in elaborating layers of personal information through interpersonal relationship to reach the core for the most intimate details. This theory can occur in different contexts from a romantic relationship

to social groups. Exchange of information is crucial to the development of relationships. Vital to social penetration is breadth referring to the number of topics discussed and depth referring to the degree of intimacy. Public Relations is about building and maintaining relationships with the target public, this theory is thus relevant to this study because it essentially deals with building and maintaining long-lasting relationships but also crucial in evaluating the effectiveness of communication as entails feedback for communication to be complete.

Conceptual Perspective

Standard and operational definition of independent and dependent variables: According to the Public Relations Society of America, Public relations is the strategic communication process that builds mutually beneficial relationships between organizations and their publics. Lattimore, Baskin, Heiman and Toth (2008) define public relations as a leadership and management function that helps achieve organizational objectives, define philosophy, and facilitate organizational change.

In the context of this study, public relations was defined as the deliberate communication process by research institutions aimed at establishing mutual relationships with the target publics.

Griffin (1997) defined effective communication as the process of sending a message in such a way that the message received is as close in meaning as possible to the message intended. While the American Management Association considers communication to be effective if it entails the ten commandments. They include; clear idea topics, purpose, physical and human setting, consult where appropriate, be mindful of over tones, seize opportunity, follow up on communication, communicate for tomorrow as well as today, support your communication with actions, be a good listener.

In the context of this study effective communication was defined as a communication intended to bring about a clear understanding defined scientific concepts.

Contextual Perspective

All health-related research in the country is done at the three research institutions at Mulago, Wandegaya, and Nakiwogo, situated in Kampala and Wakiso district respectively. The study was,

therefore, restricted in the two districts because most of the respondents were domiciled within the mentioned geographical location.

The three institutions are Uganda Virus Research Institute (UVRI), the Natural Chemotherapeutics Research Institute (NCRI) and Makerere School of Public Health. UVRI is a medical research institute founded in 1936, while the emphasis is on viral infections, research in communicable diseases in humans and animals is also part of their mandate. NCRI was established in 1964 to justify therapeutic claims from traditional medicine practitioners through applied research, it is based in Wandegaya, Kampala. Both NCRI and UVRI are under the Ministry of Health. Makerere School of Public Health is a teaching and research institution located in within the precincts of Mulago National Referral Hospital but under the direct supervision of Makerere University a public institution. The study focused on public relations efforts by state-owned research organizations mentioned above because of they are more experienced in carrying out research, are purely funded by government and therefore have an obligation to explain their work to the public.

1.2 Problem Statement

Public Relations (PR) is a leadership and management function that helps achieve organisational objectives, define philosophy and facilitate organisational change. Public relations practitioners develop, execute and evaluate organisational programs that promote the exchange of influence and understanding among the organisation constituent parts and its publics (Lattimore, Baskin, & Heiman, 2013), however, available evidence indicated that research institutions in Uganda prefer communicating with the general public through mass media and information handouts. This is also known as the public information model of public relations (Gruning & Hunt, 1992); it does not create linkages between research organisations and the target audience and thus rendering the communication ineffective.

Research institutions in Kampala and Wakiso in particular attempt to communicate with the general public through generating factsheets and statistics which they distribute at public functions such as health camps and at their respective websites. According to the World Health Organisation HIV impact assessment the national HIV prevalence rate is estimated to reduce at only one percent every five years. The prevalence rate among the youth (15-49 years) stands at nine percent. The HIV disease burden on the country could be significantly low if the communication was consistent

and more involving the people who are the direct beneficiaries. The closed system on the other hand does not enlist participatory communication with the public, to bring about effective public relations and public understanding of science. This study aimed to justify why the selected research institutions in Uganda needed to consider prioritising public relations as a communications tool in building and maintaining relationships with their target publics and cause effective communication of their studies.

Therefore, this study aimed to address the problem from: the perspective of public relations professionals, researchers and communities from which research studies are carried out to determine the effectiveness of public relations attempts in communicating research findings.

1.3 Purpose of the Study

The purpose of this study was to establish the relationship between public relations and effective communication by selected research institutions in Uganda.

1.3.1 Specific Objectives

The study was guided by the following objectives:

1. To determine the effect of dialogue on public understanding of science in Uganda
2. To examine whether or not the intended message is the received message among community members in Uganda
3. To examine the medium or combination of media that will aid effective communication of science in Uganda
4. To examine the effect of community engagement on public understanding of science in Uganda

1.4 Research Questions

1. What is the effect of dialogue on public understanding of science in Uganda?
2. Does the message reach the target audience as intended?
3. Can the recommended medium/media aid effective communication of science in Uganda?
4. What is the effect of community engagement on public understanding of science in Uganda?

1.5 Hypothesis of the study

The deployment of Public Relations in communicating science with target audiences would lead to better understanding of science by the Ugandan public.

1.6 Scope of study

Content Scope:

The study was limited to public relations and science communication from scholarly publications that include books, articles, and online resources. The researcher utilized conventional and digital libraries.

Temporal Scope:

The study was conducted and completed between August 2019 to June 2019. This was enough time for the researcher to engage with all the respondents. This time was substantial for the researcher to get to the bottom of the problem.

Geographical Scope:

The study was carried out in Wakiso and Kampala districts. All government funded health research institutions are situated in the two districts and therefore the study was to be restricted in these areas. The researcher's area of interest was health research institutions, particularly located at Nakiwogo, Wandegaya, and Mulago.

1.7 Significance of the study

The results/findings of the study are significant to the following categories:

- Public relations practitioners in science and technology-based institutions will find the study valuable as it suggests the best ways of building and maintaining relations and effective management of the trust portfolio.
- Public relations students and future researchers will find the study helpful and probably interesting to consider working with science-based institutions and help them in refining effective public relations strategies through further research.
- Research institutions will get to appreciate the crucial role of public relations in engendering critical relations with their strategic public.
- And finally, as a researcher I got to understand how the different institutions are structured, their communication gaps and how they can be overcome.

1.8 Operational definition of Key Terms

Public relations: This is a strategic communication process that cultivates and maintains mutually beneficial relationships between science organizations with their target publics.

Science Communication: communication intended to bring about public appreciation of science.

Dialogue: This is two-way communication that entails sending a message, get feedback and respond accordingly and appropriately.

Effective communication: a two-way communication process that involves one party sending a message that is easily understood by the receiving end.

Community engagement: is a deliberate form of cooperation with communities within which an institution operates to either inform, consult, involve, collaborate or empower.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter presents the theoretical review, conceptual framework, a review of related studies and research gaps.

2.1 Theoretical Perspective

Public relations professionals consider a number of theories when deciding on how to build successful relationships with their publics. The theories help explain the way things work or happen by providing an understanding of the relationship between actions and events. A theory is, therefore, a prediction of how events and actions are related.

Systems Theory

This theory looks at organizations as made up of interrelated parts, adapting and adjusting to changes in the political, economic and social environments in which they operate. The Systems Theory was propounded by Ludwig von Bertalanffy and William Ross Ashby in 1954. The theory is important to public relations because it gives PR practitioner a way to think about relationships. This system's perspective emphasizes the interdependence of organizations with their environment. For instance, organizations depend on resources from their environments, they include, raw materials, employees, customers for the services or products produced by the organization. The environment needs the organizations for its products or services.

Organizations with closed systems do not seek new information. Public opinion is inconsequential. the decision makers rely on their personal preferences or are guided by what happened in the past. such organizations hardly need public relations to mediate with the environment. Organizations with open systems rely on public relations to return feedback on how productive their relationships are with their respective stakeholders. Monitoring relations is a major component of public relations. Systems theory thus requires public relations practitioners to keep a watchful eye both within and outside the organization.

They mediate between the organization and stakeholders, and interpret the environment to the organization – problems and opportunities in the environment and help decision-makers respond to these changes. If the system is open, the organization can easily adapt to the environment by using the information through a two-way flow of communication. Organizations running a closed system remain closed to the information from the environment, and thus less likely to build crucial and effective relationships with the public. It may take a crisis for an organization to accept environment changes and open up (Lattimore, *et al*, 2008). Systems theory is very useful for managing either a two-way asymmetric or two-way symmetric public relations because they are both designed to help the organization deal with the environment (Grunt and Hunt, 1984).

This theory was thus crucial to this study because it explained the correlation between organization culture and the type of public relations deployed.

Figure 2.1 Closed system concept

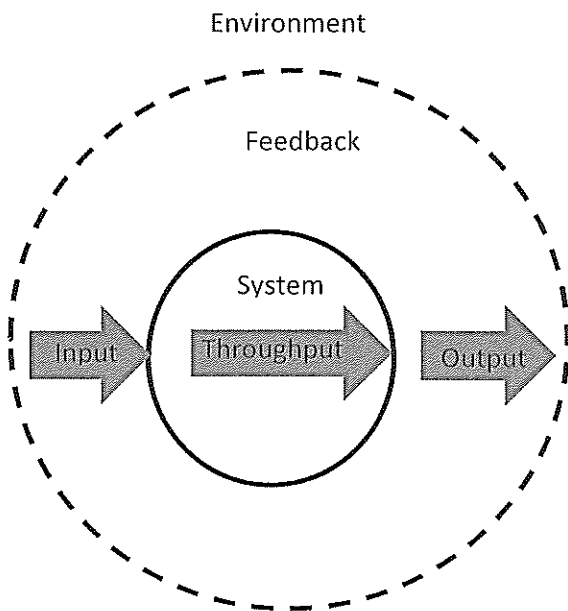
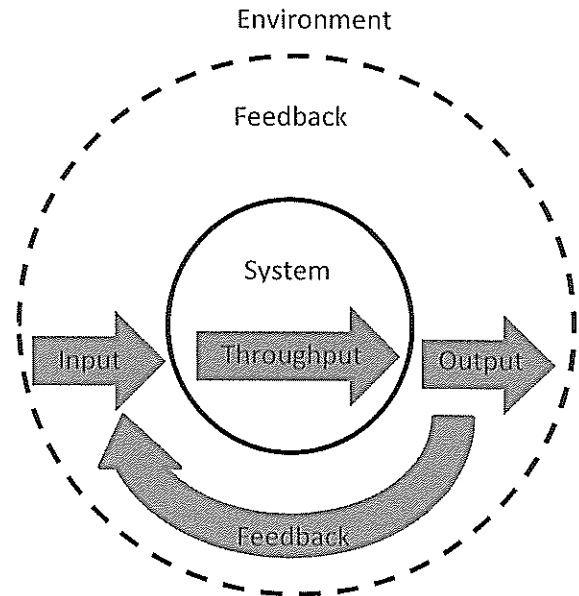


Figure 2.2 Open system concept



Source: Adapted from Gruning and Hunt 1984: P.94

The Social Penetration Theory

In 1973 psychologists Irwin Altman and Dalmas Taylor developed the social penetration theory. The theory explains differences in communication in relation to the depth of interpersonal relationships. Social penetration is specifically accomplished through self-disclosure, revealing information about oneself (Carpenter & Greene, 2016). As relationships grow, the rate of self-disclosure grows while the facts disclosed become increasingly intimate in nature. Relationships stagnate when the people involved refuse to self-disclose.

The onion model described by Altman and Taylor is a useful metaphor in elaborating self-disclosure. Self-disclosure is the voluntary sharing of personal history, preferences, attitudes, feelings, values, secrets, etc., with the other person. The authors equate personality structure to the multi-layered onion – layers of beliefs and feelings about self, others and the world; deeper layers symbolize more vulnerable, protected, and central to self-image. Peel the outer layer of an onion, and you will find another beneath it. Altman and Taylor that on the surface level biological information exchange takes place easily, perhaps at the first meeting. Remove that layer and you will expose a third, and so on (Griffin, 2008). The outer layer includes a myriad of details that certainly help describe the person self-disclosing.

Stages of self-disclosure

Self-disclosure goes through a number of stages as an interpersonal relationship progresses. These include orientation stage where people share only superficial information about themselves (outer layer), at this stage people are careful and cautious when disclosing information. For example, when you have just joined school you do not share great fears or damaging secrets with your roommate on the first day. At the exploratory affective stage people are less cautious and reveal a little-detailed accounts of themselves, a casual friendship develops but deeply personal information is withheld. The affective exchange is the third stage at which information from the more intermediate layers is shared and interactions are increasingly casual. Communicators feel comfortable enough to criticise each other. At the stable stage, communication is characterized by openness, breadth, and depth across conversation topics. The most intimate information about the private self is continuously disclosed at this stage with comfort.

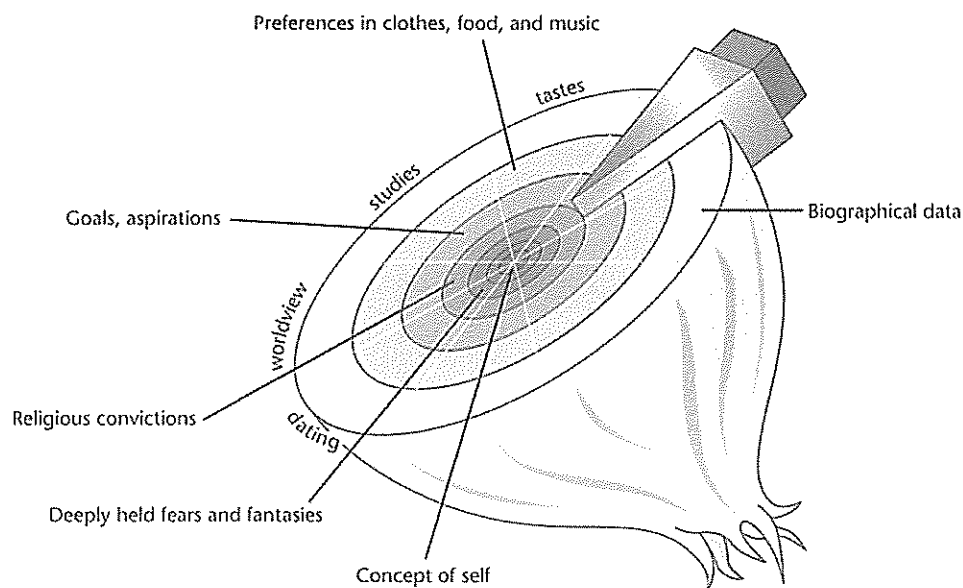
Vital to social penetration is breadth referring to the number of topics discussed and depth referring to the degree of intimacy or how much detail is revealed on a given topic. When self-disclosure is reduced as a sign of interpersonal conflict, de-penetration sets in. De-penetration is the deliberate closing off of some portions of a persons' life to the partner.

Reward-Cost assessment

The extent to which one chooses to self-disclose depends upon the outcome of the reward-cost assessment, communicators weigh the risks of self-disclosure against its potential rewards. Sharing personal information can strengthen relationships and opens fresh lines of communication with a partner. However, if a partner were to react badly to the information, mistrust, and separation could result. Before disclosure, therefore, communicators consider such factors as trust, loss of privacy or longevity of the relationship. For as long as rewards outweigh the costs, information is shared.

Barriers to self-disclosure between people could include gender, race, religion, social status or ethnic background. For example, men usually refrain from expressing deep emotions of fear of social stigma (www.communicationstudies.com).

Figure 2. 1 Illustration of the Social Penetration Theory



Source: Adapted from Griffin 2008: P.115

Relevancy of the theory to the study

Public Relations is about building and maintaining relationships with the target public, this theory is thus relevant to this study because it essentially deals with building and maintaining long-lasting relationships but also crucial in evaluating the effectiveness of communication as it entails feedback for communication to be complete. The theory encompasses aspects of a complete communication process where a sender formulates a message and sends it through a channel to a receiver who interprets the messages and send feedback. there is also a chance of noise as the message is being transmitted. As purported by the American mathematician Shannon Weaver in 1948.

Social Penetration and Systems theories in relation to the study

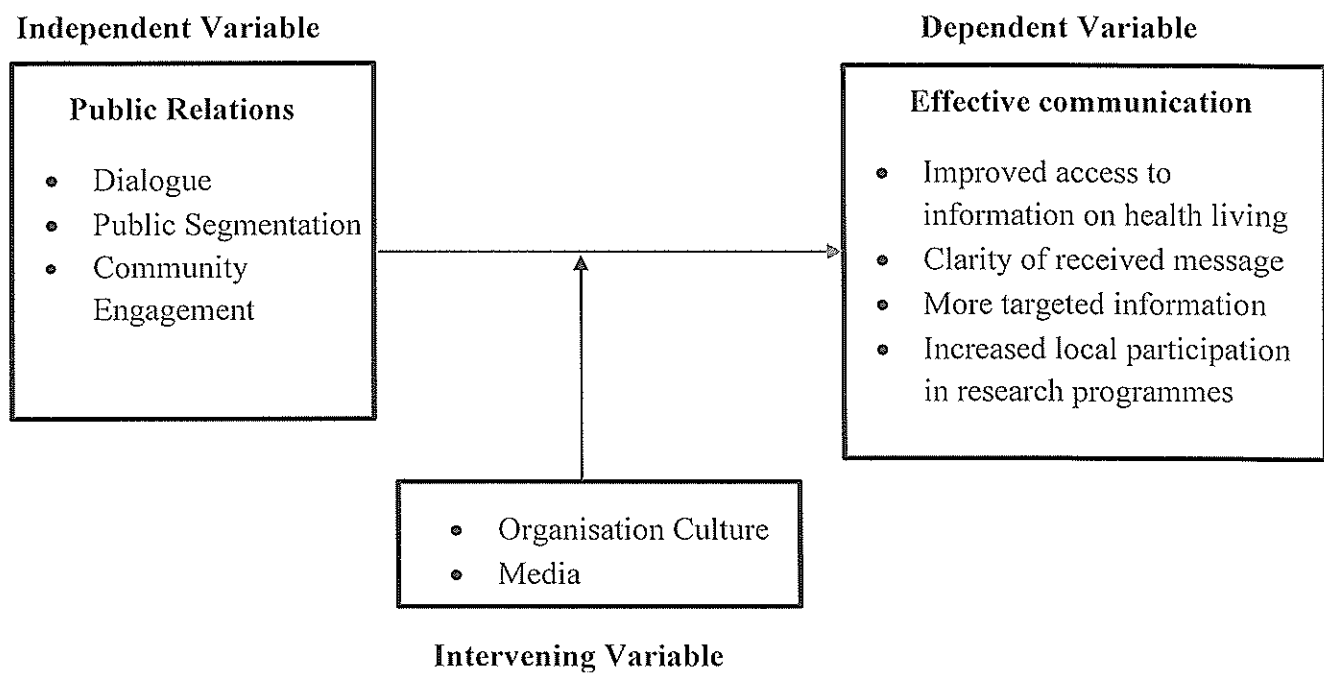
Most research institutions in Uganda pursuing studies mostly in agriculture (the backbone of the economy) and health are public entities wholly owned by the government. It is imperative that the scientific community improves relations with society because they are the sole beneficiaries of these studies, attract more funding from government and excel at their trade.

The kind of system deployed by research institutions in Uganda was also crucial in defining the type of public relations used by these organizations. The study opined the adoption of the Social Penetration theory by research institutions in an effort aimed at bringing about proper communication and understanding of science. The two theories were crucial in elucidating public relations and effective communication by research institutions in Uganda.

2.2 Conceptual Framework

The conceptual framework predicts in-effective communication of science by research institutions in Uganda because public relations does not seem to be well grounded in the management systems or objectives of these public institutions. The organizational culture seems skewed toward the public information model of PR which does not enlist mutual understanding with the Uganda community to translate into better understanding of science.

Figure 2. 2 Conceptual Framework



Source: Researcher, 2019

Fig. 2.4: Indicates the relationship between public relations and effective communication

From the above figure, the dialogue will lead to effective communication because its only through stakeholder consultations that an organization will know the needs of their publics and thus design products and services that address the needs and challenges of the communities they serve.

Segmenting publics is essential in ensuring the information is tailor-made to address the needs and expectations of a particular group, thus deeming the communication effective.

Regular interaction with the media will lead to improved relations - the media will show more interest in covering science if the organizations and scientist are open to interviews, press briefings, and tours.

All scientists need communities from which to carry out experiments, a good advocacy campaign needs to be in place in order to attract participants to particular studies and communication is deemed effective if respondents volunteer to participate in the study in large numbers.

However, all the above public relations efforts will prove effective if the organization culture (intervening variable) is open – it values environmental factors. Well-grounded media relations are also crucial in effectively communicating with the masses.

Public Relations

Considered the largest public relations (PR) association in the World, the Public Relations Society of America (PRSA), in 2012 defined public relations as a strategic communication process that builds mutually beneficial relationships between organisations and their publics. (www.prsa.org). This definition is simple and straight forward - PR is about cementing relationships.

It is important to note that PR is not a 20th century phenomena, its roots could be traced to hundreds of years ago when persuasive skills were deployed by politicians to influence the public and public opinion. According to Lattimore *et al* (2009) rhetoricians and press agents were the forerunners to present-day public relations. In its infancy PR was practiced by mainly politicians in the United States of America – ratification of the U.S. Constitution, for example, is attributed to the publication and dissemination of the Federal Papers.

The early 1900 saw the rise of PR agencies starting with former journalist George V.S. Michael who established a Publicity Bureau in Boston with the main purpose of supplying factual information of his clients to newspapers. President Roosevelt made extensive use of press conferences and interviews, leading many to believe he ruled the country from the newspapers' front pages. After working in the mayoral campaign of 1903, the man believed to be the father of public relations, Ivy Ledbetter Lee together with George Parker opened a publicity agency in 1904. Lee signed on a number of famous enterprises including John D. Rockefeller whose image was tainted when he stood accused of negligence at one of his mines where a horrible accident left

several miners, women and children dead (Lattimore *et al*, 2009). Since then Public relations has become a part of most modern businesses either directly as employees of the business through a PR department or as consultants.

If we revisit the definition above, public relations practice is planned sustainably to keep the organisation and the target public abreast of developments from either side and ensure relations are beneficial to both sides.

However, public relations can also be understood from the kind of audiences a PR professional engages with or by content of the activity, for example; media relations, public affairs, investor relations, etc., it is important to note that these categories most times do overlap – copywriting and corporate PR are hard to differentiate.

Whilst most institutions most especially government entities are yet to come to term with the fact that PR in a contemporary society has since become a strategic management role, counterparts in the developed world are already institutionalising PR as a strategic management position. To most people, public relations has become institutionalised as a messaging activity whose purpose is to make organisations appear good in the media or to sell products, usually through uncouth means, rather than as a management activity that improves relationships among stakeholders and organisations [Grunig, 2010]. This best describes the current situation in a number of Uganda's public institutions.

The Stockholm Accords affirm that public relations plays a major role in expansion of network society and improves relationships with increasingly influential stakeholders, as well as with society at large, "...develops skills, continually nurture its relationships with customers, investors, communities, governance, active citizen groups, industry alliances, mainstream and digital media and other situational stakeholders." (Stockholm Accord 2010, P.7)

Models of Public Relations

In 1984 James Grunig and Todd Hunt published the Four Models of Public Relations in their book *Managing Public Relations*, the four models have since become a cornerstone of public relations teaching and practice. The models describe different forms of communication between an

organisation and its stakeholders. The models have furthermore formed a basis for academic research over the years.

Press agency /publicity model

This model follows one-way communication where information flows from one direction from sender to receiver. The receivers' feedback, reviews and opinion are of no much concern to the sender. Public relations professionals use persuasion and manipulation to influence audiences to behave as the organisation desires. The organisations thus hire experts to create positive image of the brand, by influencing potential customers or by simply imposing their ideas and creative stories. Information flows from only the public relations expert to the target audience. Examples include electronic and print media advertisements or event publicity like sports.

What is unique about press agency is the direction of information flow: it is entirely one-way, from the organisation to its publics, and there is hardly any feedback loop from the public to the boardroom or the laboratory bench – with the exception of profits, recruitment or financial support [Grunig and Hunt 1984].

Public Information model

This is also one-way communication but unlike the press agency, this tool concentrates on maintaining and enhances the image of an organisation by simply circulating relevant and meaningful information among target audiences. The public relations experts here dwell on using press releases, news release, video release or any other recorded communication most often directed at the media to mass circulate information about the brand. Newsletters, brochures, success stories also fall under this category and distributed at intervals to target audiences for brand positioning. The public relations expert under this model ought to possess a flair for writing, by putting thoughts into meaningful words to influence the consumers. The target audience may include employees, stakeholders or investors. The public relations practitioner deploying this tool is often referred to an in-house journalist. This model is very popular with government.

Two-way asymmetrical model

Also known as the imbalanced model, this tool is rooted in persuasive communication and manipulation to influence target audiences to behave as the organisation desires. Communication revolves around two parties in somewhat an imbalanced form, since there is no usage of research to get the reaction or feelings of stakeholders - typical of Non-Governmental Organisations.

Two-way symmetrical model

This is perhaps the most ideal way of enhancing an organisation's reputation among the target audience. According to this model public relations professionals use communication to negotiate with the public, resolve conflict and promote mutual understanding and respect between organisations and its stakeholders. There is free flow of information between the organisation and its stakeholders, investors, employees, etc. This model will manifest if the flow of information among and between parties is flowing in a desired manner. The feedback from stakeholders and target audience are paramount. Social responsibility, public understanding and two-way communication are adaptive organisational goal best attained with this PR model. These goals will be acceptable to an organisation if the public relations profession is part of the dominant coalition (senior management) to effectively argue for such goals. PR must be considered important by management [Gruning and Hunt, 1984].

2.3 Review of related literature

The review of the related literature was based on the objectives of the study.

2.3.1 Dialogue and public understanding of science

Dialogue or negotiations are at the heart of the two-way communication model that the Ugandan scientists need to adopt while designing public relations functions of their respective organizations. Dialogue: communicating science is not considered a one-way dissemination of information to the lay public – whilst scientists have facts at hand, the concerned public have the local knowledge, interest and the problem to be solved. There is a critical need for feedback; even linear communication processes like television and radio are affected by audience rating in form of feedback (Burns, O'Connor & Stocklmayer, 2003).

There are a number of reasons as to why science needs to deploy public relations, in, for example, crisis communication in centers of scientific excellence; low levels of public understanding of science, lack of consensus among politicians and scientists. PR's major objective is achieving mutual consensus via dialogue (Jasinski, 2010).

A number of international protocols emphasised the need to engage with publics in decision-making especially in regard to environmental management. The Rio Declaration on Environment and Development Principle 10, reads "... States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy shall be provided." (UN, 1992).

Dialogue in regard to bringing about public understanding of science could also be referred to as: citizen science, stakeholder engagement or multi-stakeholder dialogue. Some have gone ahead to refer to it as an 'extended peer review' where with interest in or affected by a product of science become part of the evaluators. A continuum of participation that includes provision of information, consultation (seek public feedback), involvement (publics participate in defining an appropriate solution), and finally empowerment (participation includes defining the problem and the solution) is considered more appropriate. Dialoguing with the purpose of bringing about better understanding of science could take up four trends; that include form of engagement, frequency, timing and content. Consensus conference and citizen panel are some forms of engagement, with former there is open dialogue between experts and citizens and the media, while with latter a selected group of citizens under the guidance of an expert formulate questions to be answered at a conference (Einsiedel, 2008).

2.3.2 Effective Communication

Cutlip & Center published the "7 C's of communication" in Effective Public relations in 1952. These are: completeness, conciseness, consideration, concreteness, courtesy, clearness, correctness. For completeness, communication must convey all facts required by the target group. Conciseness means communicating what you intend to convey in the least possible words – this both time and cost saving. Consideration means making an attempt to understand your audience, i.e., the audience's point of view. Adjust your message to suit the audience's needs while making your message complete. Clarity suggests emphasising on a specific objective at a time, while

concreteness implies being particular and clear by using facts and figures. Courtesy calls for the sender to be sincere, polite, judicious and not biased, and the last one being correctness implies that there must be no grammatical error, the message must be correct and well-timed (www.managementstudyguide.com).

Whilst most institutions most especially government entities are yet to come to terms with fact that PR in a contemporary society has since become a strategic management role, counterparts in the developed world are already institutionalizing PR as a strategic management position. To most people, public relations has become institutionalized as a messaging activity whose purpose is to make organizations appear good in the media or to sell products, usually through uncouth means, rather than as a management activity that improves relationships among stakeholders and organizations (Grunig, 2010).

The Stockholm Accords affirm that public relations plays a major role in the expansion of a network society and improves relationships with increasingly influential stakeholders, as well as with society at large, "...develops skills, continually nurture its relationships with customers, investors, communities, governance, active citizen groups, industry alliances, mainstream and digital media and other situational stakeholders." (P.7)

Effective communication entails establishing relations and build lasting trust with the community. The tenets of complete and effective communication include receiving feedback from the person(s) to whom the communication is intended. This is crucial in effective communication because with it one easily assess whether the message sent was received as intended. In 1948, Shannon Weaver published an effective communication model – a source encodes a message and transmits it through a channel to a receiver who decodes the message. The message is, however, likely to be distorted in transmission from the source to the receiver. This process is referred to as noise (www.communicationtheory.org).

Effective Public Relations

The Excellence theory in Public Relations

The Excellence Theory is a general theory which opines that the real value of public relations lies in the organisational-public relations. The theory elaborates the value of public relations to organisations and society based on the social responsibility of managerial decisions and the quality of relationships with stakeholder publics. It was developed and published in 1992 by James E. Grunig. He argues that for an organisation to be effective, it must behave in ways that solve the problems and satisfy the goals of the stakeholders as well as management. To behave in socially acceptable ways, organisations must scan their environment to identify publics who are affected by potential organisational decisions or who want organisations to make decisions to solve problems that are important to them. He asserts that organisations must embrace symmetrical communication with the target publics to cultivate high-quality, long-term relationships (Grunig, 1992).

Grunig published his theory after years of research funded by the International Association of Business Communicators (IABC) Research Foundation, to study best practices in communication management. From interviews he held with CEO's and senior public relations officers, he boldly reveals that good relationships are of value to organisations because they reduce the costs of litigation, regulation, legislation and negative publicity caused by poor relations.

The theory furthermore alludes that public relations executives play a strategic managerial and administrative manager role. Accordingly, the theory stands strong against sublimating public relations to marketing or any other management function – public relations executives should be empowered by having access to key organisation decision-makers. “In contrast to the common view that PR is a technical support function for other management functions, the excellence study showed that PR is a unique management function that helps an organisation interact with the social and political components of its environment.” (Grunig, 2002)

Grunig and team after 10 years of research in three countries (USA, Canada and England) published the Excellence Theory in public relations that proposed four programmes under which public relations can be effectively performed in any given organisation. They are: Programme level where organisations are required to empower public relations as a critical management function.

Functional level maintains public relations should be an integrated communication function and separate from other functions including marketing. Organisation level states effective organisations should base internal and external communication and relationship building on a two-way symmetrical model. Communication should be participative but not authoritarian in nature. Economic level requires organisations to design programmes that are of tangible value, for instance, bring about job satisfaction among employees or reduce costs of regulation and litigation. At the core of the Excellence Theory is two-way symmetric model of public relations practice where organisation dialogue with their respective stakeholders for mutual benefit.

Most research institutions in Uganda pursuing studies mostly in agriculture (the backbone of the economy) and health are public entities wholly owned by government. With the apparent low levels of awareness and understanding of science by the public, the scientific community needs to improve relations with society who are the sole beneficiaries of these studies, attract more funding from government and excel at their trade.

For public relations to be effective in public health, reputation management and relationships with stakeholders must need to be strengthened. In all organisations the purpose of public relations, inter alia, strives to build and maintain a positive reputation. There five characteristics to reputation management to be effective are: ethical behaviour where an organisation and this case a research institution is commits to high standards including communication. Honourable workplace comes in second and here a research institution must value its employees with an appealing work environment. Effective leadership, any public institution must have a clear vision for the future. A research institution should recognise that it exists to provide a service to the public, and finally a research institution should provide consistent high quality services and information. With a full adherence to the above five characteristics public relations effectively delivers on reputation management of an organisation through issues and crises management (Springston & Lariscy, 2005). Springston *et al*, argue that relationships with stakeholders are crucial because public health efforts require large scale collaborations many organisations and individuals, especially in implementing large scale campaigns.

These partnerships are essential in bringing strength to the public health efforts.

2.3.3 Media and how they aid effective communication from a PR perspective

Mediated communication could be effective if the target audience is large or spread over a large area. The media are an important public relation tool, they include, electronic and print media or exhibitions. These are selected dependent on the objectives of the message to be disseminated. Broadcast media are ideal if the objective of the research institution is to provide information to the target community. For effective communication of science, public relations should integrate aspects of marketing, while maintaining traditional tools like press releases and conferences (Jasinki, 2010)

Enjoyment (movies) of science as a form entertainment could also be effective in communicating science with the general public and thus improve on the public understanding and appreciation of science. Mediated communication of science makes science seem more palatable to the public because of the visual aids, thus improved awareness and eventual understanding of science (Burns, *et al.*, 2003).

Justifiable information about the benefits and harmful effects of drugs and technologies must be provided to enable rational choices in their acquisition, distribution and use. Effective communication, choice of messages and media must correspond to culture and beliefs of the target groups to enable them comprehend and adopt the conclusions. Popular media included: newspapers, radio, television and online news services. Just like in other professions public relations in science related organisations, should view a journalist as a medium through which to reach a larger audience, and gatekeeper representing and responding to the needs of the public. It's paramount to understand that good media relations begin with good personal relations with the media practitioners (Lattimore, Baskin, Heiman & Toth, 2017).

Effective relations with media publics require knowledge of media behaviour effects. Journalists seek and process information when they cover events, interview sources, or assign stories. When journalists process information more than they seek, media relations experts can influence their communication behaviour much more than they could if reporters actively seek information (Grunig & Hunt, 1984).

2.3.4 Community engagement and public understanding of science

Community engagement is a term also often used interchangeably with community involvement or community participation. Community engagement can thus be defined as involving people in an area with local redevelopment. Success in a community can be achieved through a range of approaches and activities, these oscillate from giving people information and asking them for their views; to giving them a direct say in the decisions or control for future development. Centers for Disease Control and Prevention (CDC) defined Community engagement as the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people.

Community engagement is the blend of science and art. The science stems from among others sociology and political science, whilst the art comes from the understanding, skills and sensitivity used to apply and adapt the science to best fit the community and purpose. Community engagement can be labour and financial intensive requiring dedicated time, funding, and a unique skill set. A community can be anything from a geographical location to meaning a community of similar interests to a community of affiliation. It is therefore, imperative to devise guiding strategies that best fit your target community to be informed, consulted, involved and empowered. For a community engagement to be succeed it must encompass strategies and processes that resonate with the target community in which it eventually manifests (Development, 2019).

There are five objectives from which to choose when embarking on a community engagement activity, these were developed by the International Association for Public Participation, they are; inform-this involves keeping the public informed through the media. Consult aims at obtaining public feedback, involve relies on public responses before a decision is made, collaboration entails working at the community in formulating solutions while empowering aims at placing final decision-making in the hands of the public. Community engagement is important in improving health promotion and health research, it improves the consent process and identifies ethical pitfalls, the general public is likely to be more receptive to the research and reap greater benefits from it (NIH, 2011).

2.4 Related Studies

Jasinski (2010), made a case that public relations practice had a potential role to play in improving the relations between academic science and society. He argued that Central and East European Countries (CEECs) were evident with bad communication between science and society, low levels of public understanding of science (PUS), and weak cooperation between the science and production sector. He noted that with the advanced market reforms in CEECs and the direction towards knowledge-based economies, the science sector was challenged to communicate better with society.

Quoting Schiele (2006), Jasinski acknowledged that communicating science is a long-term process that needed to take into account the time taken to develop social relationships and shared meanings. Communicating science needs to respond to clearly identified local issues, by fostering local actions focused on concrete situations.

While he credited Poland for making strides in communicating science through dissemination and popularization, he faulted the nation for side-lining science promotion. He blamed low levels of PUS for contributing to the underestimate of science by the public. He strongly advocated for the promotion of science through a number of PR tools like press kits, annual reports community relations and media identity.

Jasinski's solution was purely the typical supportive PR that would best fit a profit-driven private sector; it is easier to justify shareholder objectives. He also falls short of providing a clear distinction between popularization and promotion. Are they in a way different? He doesn't seem to acknowledge the two-way symmetrical model of communication and strategic positioning of PR executives at science-based institutions and the great bearing this might have on PR output.

Matt Shipman (2014) attempted to distinguish between science communications and public relations, he said public relations efforts are usually aimed at making the institution look good and helping it achieve its strategic goals, such as elevated prestige among peers or increased funding. Shipman dwells more on publicity and public support, he concurs that successful communication of science is almost entirely as a result of public relations. He adduced an example of how science articles reviewed by newspapers, were more cited by other researchers than those published in journals. He also believed through mediated channels and institutional publications scientists could

enlist public support which would eventually influence increased funding. Shipman, just like most writers, fronts press agency and public information models as the best modes of communicating science. These two tools of communication are entirely one-way and do not seem effective in communicating science with target audiences.

Burns, O'Connor, and Stocklmayer (2003) gave perhaps the most elaborate explanation to communicating science. The team argues that science communication is not about encouraging scientists to talk about their work, nor is it an offshoot of the communication discipline. Public awareness of science (PAS), public understanding of science (PUS), scientific culture and scientific literacy are terminologies often used interchangeably to mean science communication but they are not synonymous. PAS cultivates positive attitudes toward science, PUS as the name suggests fronts grasping the scientific content, processes, and social factors; science literacy is the ability to read, comprehend and apply scientific principles to everyday life; scientific culture is a society-wide habitat that appreciates and supports science and science literacy.

The trio through an outcomes-type of view defined science communication as the use of appropriate skills, media, activities and dialogue to produce one or more of the following personal responses to science (the AEIOU vowel analogy): Awareness (familiarity with concepts), Enjoyment (appreciating science as entertainment), Interest (evidenced by voluntary involvement with science), Opinion (forming, reforming and confirming), and Understanding (content, processes and social factors).

From the definition above skills may directly relate to communicating science at an interpersonal or public level, or more indirectly applied to design, organizing or facilitating science activities. Media and activities could include textbooks or distance learning material, media programmes, science clubs, science shows, and theatre. Dialogue: communicating science is not considered a one-way dissemination of information to the lay public – whilst scientists have facts at hand, the concerned public have the local knowledge, interest and the problem to be solved. There is a critical need for feedback; even linear communication processes like television and radio are affected by audience rating in form of feedback.

Dialogue or negotiations are at the heart of the two-way communication model that the Ugandan scientists need to adopt while designing public relations functions of their respective organizations.

2.5 Gaps in the literature

From the review of previous literature, this study identified some gaps that include the following:

1. Most studies on public relations in science communication emphasized the deployment of publicity or public information models of public relations. This study chose to focus on public health research institutions in Uganda for two reasons, first, the public institutions are funded with the tax payer's money and therefore need to account to the public on their expenditures and the likely benefits. Second, it is an ideal case study to understand the challenges of communicating science.
2. Most of the research reviewed approached public relations either using qualitative or quantitative method. And it was the opinion of the researcher that using one approach might be harmful to the study as the results might be skewed in favor of the selected respondents. This study adopted a mixed method approach to help the researcher understand the challenges from the perspective of the research institutions and the community from which these institutions operate.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter presents the scientific and analytical framework for the study. It involves the approach and methodology adopted and used for the study. The research design adopted and the processes used in conducting the study are also presented and discussed. It provides data requirements, forms, and sources. Data collection and analysis tools and instruments used as well as methods for presentation and reporting of findings are presented in this chapter.

3.1 Research design

The study deployed the exploratory design. Exploratory studies are mixed-method studies which use an initial qualitative phase with a few individuals to identify themes, ideas, perspectives, and beliefs that can then be used to design a quantitative part of the study (McMillan & Schumacher, 2006). By using a qualitative component at the beginning, the researcher was able to use language and emphasis on different topics of the subjects in the wording of the items of the survey. Surveys were used to discover the causal relationship between public relations and effective communication by research institutions in Uganda.

3.2 Study Population

For qualitative component of the study, the population of this study comprised of public relations officers and researchers at the Uganda Virus Research Institute, Natural Chemotherapeutics Research Institute and Makerere University School of Public Health, while for quantitative data residents of Kampala and Wakiso districts were the respondents. The combined population of both Kampala and Wakiso is 3,504, 499 (UBOS, 2014).

3.3 Sample size

Using Slovine's formula, the researcher arrived at a quantitative sample size of 400 in both districts. The combined population of Kampala and Wakiso districts is 3,504,499 (UBOS, 2014). The sample size for the qualitative data is 25. Therefore, the total population size is 425.

$n = \text{Sample size}$ $N = \text{Target population}$
--

$$n = \frac{N}{1 + N(0.05)^2}$$

$$n = \frac{3504499}{1 + 3504499 \times 0.0052}$$

$$n = \frac{3504499}{1 + 8761.2475}$$

$$n = \frac{3504499}{8762.2475}$$

$$n = 399.9$$

$$n = 400$$

Table 3. 1 Computation of sample size and sampling technique

No.	Quantitative	Sample size	Sampling technique
3	Wakiso District respondents	250	Simple random sampling
4	Kampala District respondents	150	Simple random sampling
	Total	400	

Source: Primary data, 2019

3.4 Sampling Techniques

Sampling is very important in data collection. Purposive sampling was utilized to select the respondents for the qualitative component of the study, while simple random sampling was used to select the respondents and distribute the questionnaire. Purposive sampling was used to select key informants that were interviewed during the course of this study. Purposive sampling was done by selecting participants with the required information as per the objectives of the study. Key informants for this study were public relations officers and researchers.

3.5 Source of data

Two sources of data were consulted – Primary and Secondary data.

3.5.1 Primary data

This is material the researcher gathered from information archives, questionnaire and interview results. This data was not published as yet, but it was drawn from original sources and more reliable, authentic and objective. Primary data validity was greater than secondary data because they had not been altered by any study.

3.5.2 Secondary data

This data already existed and could have been used before. Secondary data was used in this study to help the research review literature on the topic of study.

3.6 Data collection method

Questionnaires and interview guides were used.

3.6.1 Questionnaire

The questionnaire was used to gather data on the effectiveness of public relations by research institutions in Uganda. The response modes of the questionnaires in both variables were indicated as 1. Strongly Disagree 2. Disagree, 3. Agree, and 4. Strongly Agree. This part aimed at finding out the respondent's view on effective communication of science in Uganda. A participant information sheet to gather data on the respondents' demographic characteristics (gender, age, educational qualifications and years of experience) was also used.

3.6.2 Interview Guide

An interview guide was employed to determine the levels of public relations and effective communication by research institutions in Uganda. The researcher used the interview guides to capture responses from the Public Relations practitioners and scientists at research institutions because they are relatively few in number. Open-ended questions were used – a question were imposed to the respondents, who in turn, explained and discussed their answers. The target audience for the interviews was drawn from health research institutions in Uganda. The reason for selecting these respondents was because they have a unique perspective on the communication of science.

3.7 Validity and Reliability

3.7.1 Validity

Content validity index was calculated and the coefficient was 0.8, the instrument was declared valid.

$$CVI = \frac{\text{No. of questions declared valid}}{\text{total no. of questions}}$$

$$CVI = \frac{23}{29}$$

$$CVI = 0.8$$

3.7.2 Reliability

A Questionnaire pilot test with a selected group of five people (not part of the target population) was conducted. Out the thirty questions initially set, six were found irrelevant and subsequently deleted. Four questions were paraphrased for clarity and logical flow.

3.8 Data analysis

The quantitative data gathered was encoded into the computer and statistically treated using the Statistical Package for Social Sciences (SPSS version 2015). Mean and the standard deviation was used to present and analyze respondent responses on the quantitative data.

Qualitative data was analyzed using systematic review.

Table 3. 2 Breakdown of analysis used in the study

No	Item	Proposed testing method
1	Bio and demographic data	Frequency table
2	Effect of Public Relations on effective communication	Regression analysis
3	Relationship between public relations and effective communication	Correlation coefficient

3.9 Ethical Considerations

To ensure the confidentiality of the information provided by the respondents and to ascertain the practice of ethics in this study, the following activities were implemented by the researcher:

1. All respondents were asked to sign the informed consent form;
2. Acknowledged the authors quoted in this study and the author of the standardized instrument through citations and referencing;
3. Solicited permission through a written request to the concerned officials of the scientific institutions;
4. Presented findings in a generalized manner.

3.10 Limitations of the study

In view of the following threats to validity, the researcher claimed an allowable 5% percent margin of error at 0.05 level of significance value. The measure was indicated in order to minimize if not to eradicate the threats to the validity of the findings of this study.

1. *Extraneous Variables* which were beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study.
2. *Testing*: there was a likelihood of research assistants being inconsistent in terms of the day and time of questionnaire administration. There was a thorough briefing and orientation of the research assistants in order to address the threat.
3. *Attrition*: there was a likelihood of some respondents not returning the questionnaires and affected the researcher in meeting the minimum sample size. To solve this threat, the researcher gave out more questionnaires exceeding the minimum sample size.
4. *Instrumentation*: the research instrument on resource availability and utilization were not standard. To minimize risk, the validity and availability test was done to produce a credible measurement of the research variables

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter deals with data presentation, analysis, and discussions of the findings. It mainly summarises key issues from the theoretical and empirical literature, compares and contrasts findings systematically and possible relations in the process of fulfilling the overall objectives of the study.

4.1 Background information

The chapter summarises data findings together with their possible interpretations. The chapter contains general information on the respondents, expectations of the respondents regarding their views on the study, and analysis of public relations and effective communication by research institutions in Uganda. For qualitative data, sixteen (16) of the targeted twenty-five (25) respondents consented to be interviewed, representing sixty-four percent (64%) of response rate.

For quantitative data, a total of 410 questionnaires were returned valid. This represented ninety-seven point six percent (100%) of response rate.

The respondents were asked to disclose their biodata, namely, gender, age, level of education, years of experience, professional qualifications, professional membership, occupation, years lived in the community and if they hold any leadership posts. Responses to their personal information were tabulated and graphically presented as seen below:

4.2 Qualitative demographic data

Public Relations

Three institutions were selected for this study, however, only one public relations professional responded to request to participate in the study, the other respondent declined to participate in the study while the third institution did not have a public relations function nor professional.

The respondent was within the age bracket of 30-39, with a Bachelor's degree. The respondent had no professional training in public relations or communication nor was he a registered member of a public relations professional body. The respondent was yet to make a year while serving in the position.

Human Health Researcher

Table 4. 1 Gender of respondents

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	6	37.5	37.5	37.5
	Female	10	62.5	62.5	100.0
	Total	16	100.0	100.0	

Source: Primary Data, 2019

From the table above, it was revealed that the researcher used a sample population of 16 respondents out of which 37.5% were male and 62.5% were female.

Table 4. 2 Age bracket of respondents

		Age group			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-29	4	25.0	25.0	25.0
	30-39	3	18.8	18.8	43.8
	40-49	2	12.5	12.5	56.3
	50 and above	7	43.8	43.8	100.0
	Total	16	100.0	100.0	

Source: Primary Data, 2019

From the above, it was discovered that 43.8% of the respondents were 50 years and above, 25.0% of the respondents were between the age of 21-29, 18.8% of the respondents were between the age of 30-39, 12.5% of the respondents were between the age of 40-49.

Table 4. 3 Level of Education

Level of Education				
	Frequency	Percent	Valid Percent	Cumulative Percent
PhD	6	37.5	37.5	37.5
Masters	4	25.0	25.0	62.5
Valid Post Graduate Diploma	5	31.3	31.3	93.8
Diploma	1	6.3	6.3	100.0
Total	16	100.0	100.0	

Source: Primary Data, 2019

The table above revealed that 37.5% of the respondents held a Ph.D., 31.3% of the respondents had a postgraduate diploma, 25.0% of the respondents were of Masters level, while 6.3% of the respondents were of diploma level.

Table 4. 4 Level of Education

Years of experience				
	Frequency	Percent	Valid Percent	Cumulative Percent
One to Three years	5	31.3	31.3	31.3
Four to six years	1	6.3	6.3	37.5
Valid Seven to Nine years	1	6.3	6.3	43.8
Ten and above years	9	56.3	56.3	100.0
Total	16	100.0	100.0	

Source: Primary Data, 2019

From the table above 56.3% of the respondents had ten and above years of work experience, 31.3% of the respondents had one to three years of experience, 6.3% of the respondents possessed four to six years of experience and 6.3% of the respondents also had seven to nine years of experience.

4.3 Quantitative demographic data

Table 4. 5 Gender of respondents

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	243	60.8	60.9	60.9
Valid Female	156	39.0	39.1	100.0
Total	399	99.8	100.0	
Missing 999	1	.3		
Total	400	100.0		

Source: Primary Data, 2019

Table 4.5 indicates 60.8% of the respondents were male, while 39.0% of the respondents were female. 0.3% of the respondents did not indicate their gender.

Table 4. 6 Age of respondents

Age of respondents				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21-29	305	76.3	78.8	78.8
Valid 30-39	48	12.0	12.4	91.2
Valid 40-49	29	7.3	7.5	98.7
Valid 50 and above	5	1.3	1.3	100.0
Total	387	96.8	100.0	
Missing 999	13	3.3		
Total	400	100.0		

Source: Primary Data, 2019

From the table above 76.3% of the respondents were between 21-29 years, 12.0% of the respondents were between 30-39 years, 7.3% of the respondents were between 40-49 years while 1.3% of the respondents were 50 and above.

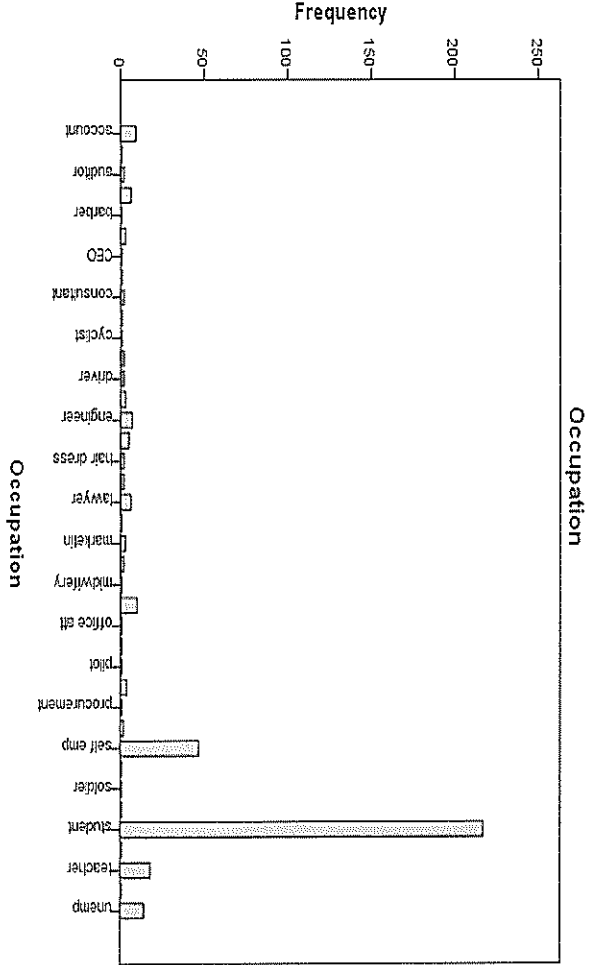
Table 4. 7 Level of Education

Level of Education				
	Frequency	Percent	Valid Percent	Cumulative Percent
PhD	10	2.5	2.5	2.5
Masters	24	6.0	6.1	8.6
Post graduate Dip	32	8.0	8.1	16.7
Valid Degree	286	71.5	72.2	88.9
Diploma	21	5.3	5.3	94.2
Other	23	5.8	5.8	100.0
Total	396	99.0	100.0	
Missing	999	1.0		
Total	400	100.0		

Source: Primary Data, 2019

The table above revealed that 71.5% of the respondents were of degree level, 8.0% of the respondents were of post graduated diploma level, 6.0% of the respondents were of masters' level, 5.3 of the respondents were of diploma level, while 2.5% of the respondents were of the Ph.D. level. 1.0% of the respondents did not indicate their level of education.

Figure 4. 1 Occupation



Source: Primary Data, 2019

The graph above revealed that majority of the respondents were students at 54.3%, followed the self-employed at 11.8%, teachers at 4.5%, the unemployed at 3.5%, nurses at 2.5%, accountants at 2.3%, engineers at 1.8%, banks and lawyers at 1.5% each, followed by farmers at 1.3%, police officers at 1.0%, marketers and editors at 0.8% each. Other occupation scored below 0.8%

Table 4. 8 Years lived in the community

Years in lived in the community					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below a year	21	5.3	5.3	5.3
	One to three years	208	52.0	52.3	57.5
	Four to Six Years	107	26.8	26.9	84.4
	Seven to nine years	23	5.8	5.8	90.2
	Ten and above years	39	9.8	9.8	100.0
	Total	398	99.5	100.0	
Missing	999	2	.5		
Total		400	100.0		

Source: Primary Data, 2019

From the table above 52.0% of the respondents had lived between one to three years in the community, 26.8% of the respondents indicated to have lived in the community between four to six years, 9.8% of the respondents had lived in the community for ten and above years, 5.8% of the respondents had lived in the community for seven to nine years, and 5.3% of the respondents had lived in the community for less than year while 0.5% of the respondents did not indicate the time lived in the community.

Table 4. 9 Years position in the community

Position held in the community		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Village chairperson	1	.3	.3	.3
	Secretary	24	6.0	6.1	6.3
	Defense	7	1.8	1.8	8.1
	Representative	32	8.0	8.1	16.2
	Member	330	82.5	83.8	100.0
Total		394	98.5	100.0	
Missing	999	6	1.5		
Total		400	100.0		

Source: Primary Data, 2019

The table above revealed that 82.5% of the respondents held no leadership positions in the community, they were simply community members. 8.0% of the respondents were representatives of different interest groups at the village councils, 6.0% of the respondents were secretaries to the village councils, 1.8% of the respondents held defense positions on the village councils, 1.5% of the respondents did not indicate their status while 0.3% of the respondents were village chairpersons.

4.4 Data Analysis

Analysis was based on the objectives of the study.

Table 4. 10 Descriptive Statistics

Descriptive Statistics

Label	N	Mean	Std. Deviation
It is important to be involved	393	3.48	.707
There should be a willingness to change	361	3.30	.878
Important to receive final decision	365	3.20	.828
Representative participation is key	349	3.19	.791
Genuine engagement is crucial	350	3.19	.845
More voice, lead to better communication	363	3.17	.863
I can influence a researcher's decision	368	3.16	.674
Researchers value of community input	376	3.15	.825
Potential respondents should be involved	374	3.14	.866
Prior discussions help me understand explanations	367	3.05	.929
Communication is two-way	366	3.03	.804
Science is complex	376	3.00	.970
Researchers are truly interested in my involvement	356	2.96	.807
Science Communication One-way	358	2.91	.803
All participants must be held accountable	353	2.91	.885
Research literature provided is clear	351	2.85	.831
There is equal participation	364	2.82	.910
Researchers should seek community input	368	2.60	1.047
I accept the final decision if given the opportunity	354	2.10	.966
Researchers provide me with all useful information	376	1.94	.932
Valid N (listwise)	261		

Source: Primary Data, 2019

4.4.1 Dialogue and Public Understanding of Science

Most respondents agreed that it was important to be involved in the decision-making process and that there should be a willingness to change for both the researcher and the respondent to build trust, this was indicated by a mean of 3.48 and 3.30 respectively. Most respondents indicated that when they offer an input, it is important they receive information of the final decision the representative mean was 3.20.

While public relations practitioner admitted lack of attempts to dialogue with communities, saying: *“My priority is to disseminate available information, I cannot interact with communities because the funds are really limited.”* Most respondents (scientists) expressed willingness in engaging in communicating science with the general public as to *“create awareness about dangerous diseases.”*

The PR respondent opined that dialogue with target audiences should be continuous, not intermittent. The respondent believed dialogue should bring about mutual understanding. The respondent only listed trust as the basic ingredient for dialogue to occur. However, the respondent hardly dialogues with the target audience. The respondent indicated fast adoption of new technologies like social media by the institutional.

4.4.2 Effective Communication

Communication is considered effective with the following facets in tow: completeness, conciseness, consideration, concreteness, courtesy, clearness, correctness (Cutlip & Center, 1952). Most respondents at the representative mean of 3.16 agreed that when they offer input, receiving information on the final decision is important to them. Majority of the respondents at the representative mean of 3.15 agreed that research organizations should communicate to the participants how their input is important to the science communication process. However, at the representative mean of 2.96, some respondents disagreed with the statement that researchers are truly interested in their involvement in the research process.

Majority of the respondents agreed that they contribute to science communication mostly is science related media like journals, symposia, and conferences. Majority of the scientists indicated

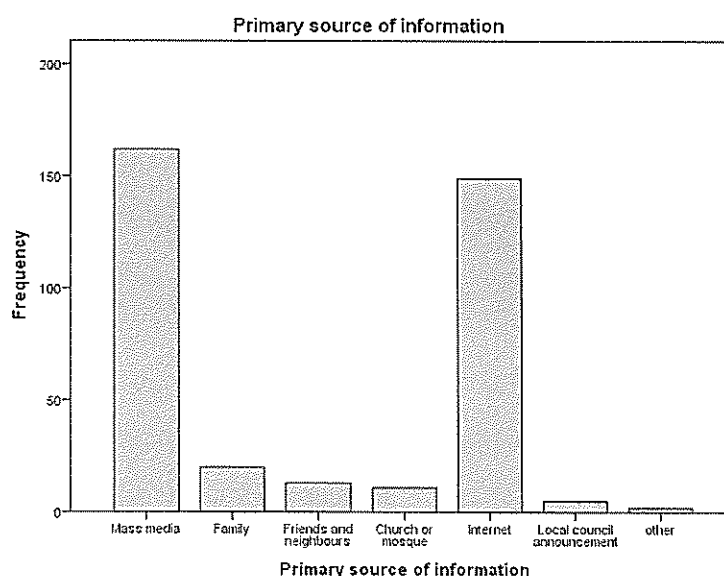
working independent of the communications team at their organizations, this ultimately affects the quality of the messages disseminated. Most respondents found it easier to communicate with fellow scientists than the general public. The hardest group of the public they find to speak to are the politicians. One respondent said “*Politicians and lawmakers don’t seem to understand the value of scientific research.*” However, the majority of the respondents considered engaging non-specialist science public important. Disseminated messages are not evaluated for effectiveness and feedback is not considered important.

Majority of the respondents indicated not working closely with the public relations office when designing communication campaigns targeting the general public. Majority of the respondents did not evaluate the effectiveness of their communication campaigns and they considered it too difficult a task.

The PR respondent informed the study that their focus is mostly on internal communication and that most of the external communication attempts are intended to bring about publicity. Disseminated messages are not evaluated for effectiveness and feedback is not considered important. There’s no stakeholder consultation when designing messages, newspaper clippings are used mostly to measure outputs.

4.4.3 Media and how they aid effective communication of science

Figure 4. 2 Primary source of information



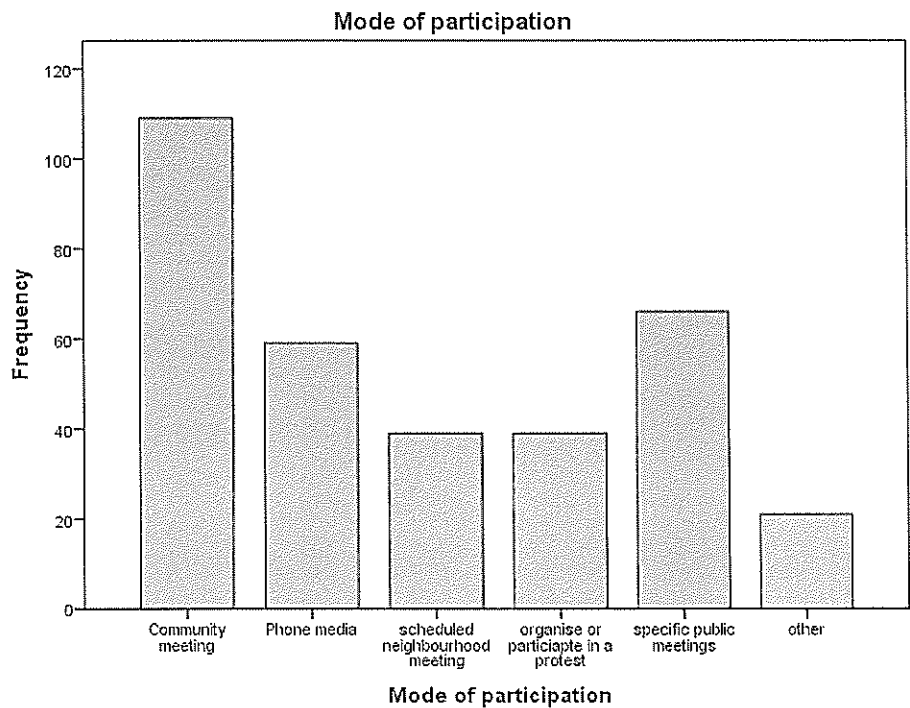
Source: Primary Data, 2019

From the graph above the majority of the respondents relied more on mass media (radio, T.V, etc.) as their primary source of information, followed by the internet, family members, closely followed by friends and neighbors, church or mosques with local council announcements coming in the tail end.

Majority of the respondents interviewed believed radio was the best medium with which to engage the general public because it reaches to more people than any other medium. A respondent said: *“Radio reaches out to the wider public because radios are more affordable than TV or social media but to be more useful the, the population needs to interact with the researcher via a talk show so that myths and misconceptions are addressed.”* Majority of the respondents further believed that it was the responsibility of the scientist to disseminate knowledge from research finding not the public relations professional. Majority of the respondents agreed to contribute to science communication mostly in science related media like journals. However, most respondents further indicated fast adoption of new technologies like social media by the institutional.

4.4.4 Community engagement and public understanding of science

Figure 4. 3 Mode of participation



Source: Primary Data, 2019

The graph above indicated community meetings as the most preferred mode of participation in give opinion or feedback to any form of science communication, this was followed by specific topic-specific public meetings, followed by participating in live broadcasts through the telephone. Scheduled neighborhood meetings and protests received an equal number of respondents. Lastly, platforms such as social media, journals, etc. were the least preferred other modes of participation.

Respondents at a 3.14 mean agreed that a community engagement system should seek and facilitate the involvement of those that are potentially affected by or interested in the research. Some respondents agreed that they would understand better the explanations for science given an opportunity to participate in the discussions at a representative mean of 3.05.

The public relations professionals focused more on internal communication and less on external communication neither do they not carried out minimal community engagement and with less opportunities for the target communities to alter set objectives. The respondent did not carry out stakeholder consultations when designing messages. Majority of the respondents believe it is important for scientists to engage with the general public, because, “...*opinions if wrong and not discussed can easily destroy science.*” Another respondent said community engagements are vital in “*creating linkages between the institution and the general public.*”

CHAPTER FIVE:

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the study, provides conclusions and recommendations in relation to public relations and effective communication of research institutions in Uganda.

5.1 Discussions

The discussions of the findings was presented in accordance with the research objectives of the study:

The first objective of the study was to find out the effect of dialogue on public understanding of science in Uganda. It was discovered that communication in regard to scientific studies is largely one-way from research institutions to the general public. Most scientists found no interest in communicating with the general public, they preferred dialoguing with fellow scientists. This was neither a priority for the public relations professional – the major purpose was to inform not interact with the target audience.

The second objective of the study was to find out whether or not the intended message is the received message among community members in the public. This was found to be hard even from the people designing communications. They could not articulate the impact of their communication. This is so because the evaluation of the message put out through numerous media is not done. This could partly be due to the failure by research institutions to hire professional in communication.

The third objective of the study was to recommend a medium or a combination of media that will aid effective communication of science in Uganda. It was found that most scientists preferred to communicate using radio to the general public. The quantitative data also pointed to radio as the most preferred source of information, however, the internet followed so closely behind. This means that disseminating and demystifying science should be diversified to multi-media communication, dependent on the target audience. The youth, for example, could be more

effectively appealed to if radio messages are simultaneously released on digital platforms on the internet.

The fourth objective was to find out the effect of community engagement on public understanding of science in Uganda. Community engagement could be referred to as the collaborative process of working with a target community to address issues that impact their well-being. This means that engagement must start at the very beginning of any project so the afflicted persons get to contribute to the research in its initial stage and in a way get to appreciate the science therein, however, it was discovered that community engagement programmes hardly exist in most of the institutions, they only practice interventional engagements. For example, when there are signs of resistance to a study by the community, that's when the outreach is offset to pacify the a would be a chaotic situation.

5.2 Conclusions

The first objective of the study was to find out the effect of dialogue on public understanding of science in Uganda. It was concluded that research institutions in Uganda do not dialogue with their target publics with a view of causing a better understanding of science. Communication is largely one-way.

The second objective of the study was to find out whether or not the intended message is the received message among community members in the public. It was concluded that since there were no deliberate efforts to evaluate the effectiveness of communication messages, it was hard to tell whether the target audience received the messages as intended by the research institutions. The communicators simply hope the public responds as anticipated.

The third objective of the study was to recommend a medium or a combination media that will aid effective communication of science in Uganda. It was concluded that radio was the most preferred medium of communication by both researchers and the majority of the respondents. Internet, however, came in close as the second most preferred medium of communication by mainly the youthful respondents.

The fourth objective was to find out the effect of community engagement on public understanding of science in Uganda. With no clear institutional policy in regard to community engagement, it

was concluded that there were no deliberate community engagement efforts by research institutions in Uganda.

5.3 Recommendations

From the findings and conclusions of the study, the research found it necessary that the following recommendations are of high importance:

- The Uganda Virus Research Institute, Natural Chemotherapeutics Research Institute and Makerere University School of Public Health need to entrench the public relations position their structures and hire qualified personnel to man the portfolio. Qualified personnel development and implement Public Relations strategies that promote effective communication with the target audiences.
- The Uganda Virus Research Institute, Natural Chemotherapeutics Research Institute and Makerere University School of Public Health should adopt deliberate efforts to monitor and evaluate all their communications. This will help with gauging the effectiveness of the communication messages. Post communication surveys, for instance would be very instrumental in achieving this.
- The Uganda Virus Research Institute, Natural Chemotherapeutics Research Institute and Makerere University School of Public Health should not continue to rely solely on the radio as a medium of communication. They should consider adopting a multi-channel form of communication for example social media in communicating with diverse audiences in Uganda. The internet is a necessary medium in this era.
- The Uganda Virus Research Institute, Natural Chemotherapeutics Research Institute and Makerere University School of Public Health should consider mainstreaming community engagement efforts. Have clear policies, allocate resources and hire qualified personnel. Community engagements should be deliberate and consistent if the objectives of the research institutions are to be achieved. Community engagements should aim at either to inform, consult, involve, collaborate or empower but not all.

5.4 Suggestions for further research

A case study research titled: Effective public relations and scientific research in Uganda, should be undertaken to explain why public relations or communications is not a grounded role in the science research institutions in Uganda. This could perhaps shed more light on why communication from research institutions is considered exclusive.

The research examined the public relations and effective communication by research institutions in Uganda, particularly in Kampala and Wakiso districts all in central Uganda. Differences may exist across regions and districts. Further studies, therefore, should be carried out in other regions before results are generalized on all research institutions in Uganda

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APPENDIX I:
INTRODUCTORY AND ACCEPTANCE LETTERS



**KAMPALA
INTERNATIONAL
UNIVERSITY**

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Tel: 0772365060 Fax: +256 (0) 41 - 501974 E-mail:
dhdinquiries@kiu.ac.ug * Website: <http://www.kiu.ac.ug>

***Directorate of Higher Degrees and Research
Office of the Director***

Friday 27th July, 2018

Dear Sir/Madam,

RE: INTRODUCTION LETTER FOR KARL RAYMOND SSENTONGO
REG. NO. 1163-06202-07082

The above mentioned candidate is a student of Kampala International University pursuing a Masters degree in Mass Communication.

He is currently conducting a research for his dissertation titled, *"Public Relations and Effective Communication by Research Institutions in Uganda"*.

Your organization has been identified as a valuable source of information pertaining to the research subject of interest. The purpose of this letter therefore is to request you to kindly cooperate and avail the researcher with the pertinent information he may need. It is our ardent belief that the findings from this research will benefit KIU and your organization.

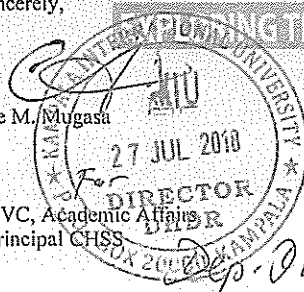
Any information shared with the researcher will be used for academic purposes only and shall be kept with utmost confidentiality.

I appreciate any assistance rendered to the researcher

Yours Sincerely,

Dr. Claire M. Mugasa
Director

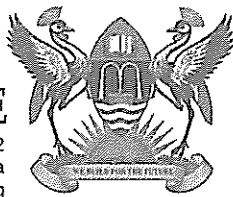
C.c. DVC, Academic Affairs
Principal CHSS



"Exploring the Heights"

MAKERERE

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UNIVERSITY

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Fax: 256 414 531807
website: www.musph.ac.ug

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

Office of the Dean

7th September 2018

Karl Raymond Ssentongo
P.O. Box 6884,
Kampala International University

Dear Karl,

Re: Approval of a research study titled: Public Relations and Effective Communication by Research Institutions in Uganda.

Reference is made to your letter requesting to carry out research at Makerere University School of Public Health. This is to inform you that your proposal to utilize Makerere University School of Public Health (MUSPH) as a valuable source of information pertaining to this research project was reviewed and approved.

This is to therefore grant you approval go ahead and approach the individuals targeted for the interviews. Please ensure that the reporting maintains the confidentiality for our School and the individuals, and also plan to share with us the final thesis before it is widely disseminated.

Sincerely,

Dr. Rhoda Wanyenze
Associate Professor and Dean



Natural Chemotherapeutics Research Institute

Plot 2B, Lourdel Road, Kampala
P.O. Box 4864, Kampala-Uganda
Tel: +256 414 250 488



REPUBLIC OF UGANDA

20th June, 2018

Karl Raymond Ssentongo
MSc-Mass Communication
Kampala International University

Dear Mr. Ssentongo,

Re: Application to Carry out Research at the Natural Chemotherapeutics Research Institute (NCRI)

This refers to your letter dated 15th June, 2018, requesting to be allowed to interview research scientists at the NCRI for your MSc-Mass Communication Research Project entitled 'Public Relations and Effective Communication by Research Institution in Uganda'.

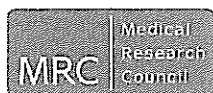
I have communicated your request to the scientist and I request that you come to conduct the interview on Thursday 5th July, 2018.

I wish you success in your studies

Yours sincerely

Dr. Grace Nambatya Kyeyune
DIRECTOR OF RESEARCH

MRC/UVRI and LSHTM Uganda Research Unit



Uganda
Virus
Research
Institute

LONDON
SCHOOL OF
HYGIENE
& TROPICAL
MEDICINE



Our Ref: MUL/18/0507

24th September 2018

Karl Raymond Ssentongo
Kampala International University

Dear Karl,

**RE: PERMISSION TO COLLECT DATA PERTAINING YOUR STUDY TITLED
PUBLIC RELATIONS AND EFFECTIVE COMMUNICATIONS BY RESEARCH
INSTITUTIONS IN UGANDA**

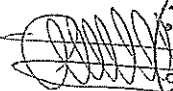
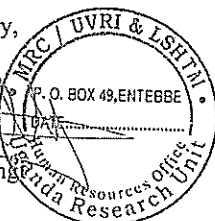
Reference is made to your letter requesting to carry out your research at Uganda Virus Research Institute / Medical Research Council and London School of Hygiene and Tropical Medicine (MRC/UVRI & LSHTM) Uganda Research Unit

We are pleased to inform you that you have been granted permission to collect data for your research titled *Public Relations and Effective Communications by Research Institutions in Uganda* at MRC/UVRI & LSHTM Uganda Research Unit – Entebbe station. The period of data collection is from 20th September to 20th October 2018.

You have been granted permission to interview the communications/public relations officer (1) and seven (7) researchers/scientists.

We expect you to adhere to all ethical responsibilities as regard to this research.

Yours sincerely,


Godfrey Kalungu


For Unit Director

MRC/UVRI & LSHTM Uganda Research Unit

MRC/UVRI and LSHTM Uganda Research Unit | C/O Uganda Virus Research Institute | Plot 51- 59 Nakiwogo Road - Entebbe | P.O Box 49 Entebbe | Tel: +256 (0) 417 704000 | +256 (0) 393 262910/1 | Email: mrc@mrcuganda.org | Website: www.mrcuganda.org

RESEARCH CONFIDENTIALITY AGREEMENT

Project title - **Public Relations and Effective Communication by Research Institutions in Uganda**

I, _____, the data collector.

I agree to: -

1. keep all the research information shared with me confidential by not discussing or sharing the research information in any form or format (e.g., disks, tapes, transcripts) with anyone other than the *Researcher*.
2. keep all research information in any form or format (e.g., disks, tapes, transcripts) secure while it is in my possession.
3. return all research information in any form or format (e.g., disks, tapes, transcripts) to the *Researcher* when I have completed the research tasks.
4. after consulting with the *Researcher*, erase or destroy all research information in any form or format regarding this research study that is not returnable to the *Researcher* (e.g., information stored on computer hard drive).

(Print Name)

(Signature)

(Date)

Researcher

(Print Name)

(Signature)

(Date)

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Department of Journalism and Media Studies at the Kampala International University. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (256) 414 501 974.

CONSENT FORM FOR KEY INFORMANTS

I would appreciate your assistance with this research project on **Public Relations and Effective Communication by Research Institutions in Uganda**. The results will be used in a dissertation. This research will help me understand the impact of communicating science with the general public by research institutions.

All you need to do respond to questions in this short questionnaire, which should take approximately **15 minutes**. If you do not wish to participate, simply decline to respond to the questionnaire. Responses will be completely anonymous; your name will not appear anywhere on the survey. Completing the questionnaire constitutes your consent to participate.

Keep this letter for your records. If you have any questions regarding the research, contact:

Researcher: Ssentongo Karl Raymond

Full address: P.O. Box 6884, Kampala – Uganda

E-mail: kaddukarl@gmail.com

Tel: +256 754 029915

Research Supervisor: Dr. Ayodeji Awobamise

Full address: P.O. Box 20000, Kasanga, Ggaba Road

E-mail: ayodeji.awobamise@gmail.com

Tel: +256 701935614

If you have any questions regarding your rights as a research participant, please contact the **Department of Journalism and Media Studies** at Kampala International University Research Ethics Committee, P.O. Box 20000, Kansanga Ggaba Road,
E-mail: admin@kiu.ac.ug.

Thank you for your help.

Signature of Participant

Date

Signature of researcher I believe the participant is giving informed consent to participate in this study

Signature of researcher

Date



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**COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
DEPARTMENT OF JOURNALISM AND MEDIA STUDIES**

July 22, 2018

TO WHOM IT MAY CONCERN

RE: Ethics Approval for Research Project – Mr. Karl Raymond Ssentongo

This letter is to confirm that the ethics clearance has been granted by the Department of Mass Communication and Media Studies at Kampala International University for the Masters Research project to be conducted by Mr. Karl Raymond Ssentongo, which is titled:

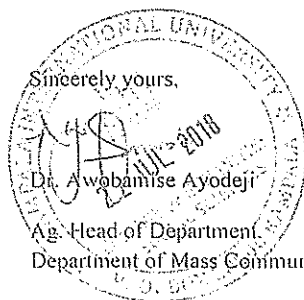
Public Relations and Effective Communication by Research Institutions in Uganda

I have read the research project application and from the information provided in the forms, research proposal, fieldwork methodology, survey and informed consent forms, I:

- I. Consider the principle researcher / student researcher to be aware of the ethical responsibilities in regard to this research;
- II. Consider that any ethical issues raised have been satisfactorily addressed or are covered by relevant guidelines and that it is appropriate for the researcher to proceed;
- III. Am satisfied that the proposal project has been / will be subject to appropriate peer review and will contribute usefully to existing knowledge and / or to the education and training of the researcher (s) and that it is in public interest.

Should you have any queries I am very happy to discuss them further with you.

Sincerely yours,



Dr. Awobamise Ayodeji

Ag. Head of Department

Department of Mass Communication and Media Studies

"Exploring Heights"

APPENDIX II:
PR INTERVIEW GUIDE

Dear Respondent,

I am Karl Raymond Ssentongo, pursuing a Masters' degree in Mass Communication at Kampala International University. I am currently conducting a study titled: **Public Relations and Effective Communication by Research Institutions in Uganda**. I humbly request you to spare some time and answer these questions. All information provided shall be treated with utmost confidentiality unless the research is permitted to.

1. Gender:

2. What age group do you belong to?

21-29		40-49	
30-39		50 and above	

3. What is your level of Education?

PhD	
Masters	
Postgraduate diploma	
Degree	
Diploma	
Other (Please specify)	

4. Do you have any training in public relations or communication?

PhD	
Masters	
Postgraduate diploma	
Degree	
Diploma	
Other (Please specify)	

5. Are you a member of any professional or organization?

Yes	No
If yes, please specify:	

6. Years of experience

Below a year	
One – three years	
Four – six-year	
Seven-nine years	
Ten and above	

7. What kind of message(s) do you communicate?
8. What are some of the objectives your messages are designed to achieve?
9. How do you evaluate the effectiveness of your message(s)
10. How do you receive feedback on your communications?
11. Do you modify messages mid-way through a campaign based o periodic feedback?
12. Do you measure outputs (press coverage), outtakes (message comprehension), or outcomes (opinions, attitudes...)?
13. Does your department or unit have set specific objectives?
14. When do you think is the best time to dialogue? what are the signals?
15. What are your expectations when embarking on dialogue?
16. What do you consider as basic requirements for dialogue to occur?
17. How often do you dialogue with the target communities?
18. What is the level of adoption of new technology in communicating your messages?
19. What kind communities do you work with (urban, suburban or rural) and where are they located?
20. What is the focus your community engagement (outreach, consultation, involvement, collaboration or shared leadership)?
21. Can a community engagement alter the focus of a project?

APPENDIX III:
SCIENTIST/RESEARCHER INTERVIEW GUIDE

Dear Respondent,

I am Karl Raymond Ssentongo, pursuing a Masters' degree in Mass Communication at Kampala International University. I am currently conducting a study titled: **Public Relations and Effective Communication by Research Institutions in Uganda**. I humbly request you to spare some time and answer these questions. All information provided shall be treated with utmost confidentiality unless the research is permitted to.

1. Gender:

2. What age group do you belong to?

21-29		40-49	
30-39		50 and above	

3. What is your level of Education?

PhD	
Masters	
Postgraduate diploma	
Degree	
Diploma	
Other (Please specify)	

4. Do you have any training in public relations or communication?

PhD	
Masters	
Postgraduate diploma	
Degree	
Diploma	
Other (Please specify)	

5. Are you a member of any professional or organization?

Yes	No
If yes, please specify:	

6. Years of experience

Below a year	
One – three years	
Four – six-year	
Seven-nine years	
Ten and above	

7. As a scientist are you interested in contributing to communicating science with the general public?
8. What do you think is the best medium to engage with the general public? (TV, radio, social media)
9. Why that particular medium?
10. Who ought to have the main responsibility for disseminating knowledge about scientific methods and results from research institutions to the public? PR or scientists, why?
11. What kind of knowledge ought to be communicated from research institutions to the general public?
12. Do you contribute to science communication in any medium or forum? How often?
13. What group of the public do you find easy to talk to? Why?
14. What group of the public to you find hard to talk to? Why?
15. Do you consider engaging with non-specialist science public important?
16. Do you think scientists should engage with the general public? Why or why not?
17. In your opinion do you consider public relations important to this institution?
18. What do you consider to be the primary role of public relations to this organization?
19. Do you believe dialogue with communities enlists better understanding of science?
20. What tools would you consider helpful in communicating science to the general public (public, lecture, exhibitions, etc.)
21. Do you work closely with the PR office in designing messages for the general public?
22. How do you measure or evaluate the effectiveness of a given message and who takes lead, PR or scientist?

APPENDIX IV: QUESTIONNAIRE

I. Introduction

The researcher is a Masters' of Science in Mass Communication student at Kampala International University, conducting academic research on **Public Relations and Effective Communication by Research Institutions in Uganda**. Your answers in this brief survey would go a long way in helping the researcher in gathering relevant data for research and shall be used only for study purposes. All information provided in the survey shall remain confidential and shall not be used for any other purposes apart from research purposes. Please direct all your questions regarding the survey to kaddukarl@gmail.com.

Thank you very much for your time.

SECTION I (BIODATA)

DIRECTIONS: Please indicate your answers by marking **X** against any of the options available. Only one answer can be marked per question. If you would rather not answer any question, please feel free to skip such a question. Endeavor that all answers reflect your thoughts and are not misleading.

1. Gender:

Male		Female	
------	--	--------	--

2. What age group do you belong to?

21-29		40-49	
30-39		50 and above	

3. What is your level of Education?

PhD	
Masters	
Postgraduate diploma	
Degree	
Diploma	
Other (Please specify)	

4. Occupation

5. How many years have you lived in this community?

Below a year	
One – three years	
Four – six-year	
Seven-nine years	
Ten and above	

6. What is your position in this community?

Village Chairperson	
Secretary	
Defense	
Representative (youth, women, special needs)	
Community Member	

SECTION II

QUESTIONNAIRE ON EFFECTIVE COMMUNICATION IN A COMMUNITY

- I. To what extent do you Agree or Disagree with the following statements:** (Please leave the response blank if you “Don’t Know” or have “No Opinion”)

		Strongly Disagree	Disagree	Agree	Strongly Agree
1.	It is important to me that I be involved in community decision making				
2.	I feel I can influence the decision of the researchers in the community				
3.	Communication about research in the community is open and two-way (conversational)				
4.	The materials that research organization provides me on the issue under discussion are clear and understandable				
5.	Anyone who wants to participate is treated as an equal in the discussion process				
6.	A community engagement system should seek and facilitate the involvement of those who are potentially affected by or interested in a decision				
7.	The researchers should seek the input of the community in designing how they participate in the research process				
8.	The research organizations should provide participants with the information they need to participate in a meaningful way				
9.	The research organization should communicate to the participants how their input is important to the science communication process				
10.	When I offer an input, receiving information on the final decision is important to me				
11.	The researchers are truly interested in my involvement in the research process				
12.	More voice in the communication process result in better communication				

13.	I can accept the outcome or final decision if I was given the opportunity to participate in the decision-making process				
14.	I would understand better the explanations for science if I was given the opportunity to participate in the discussions				

II. Please respond to the next questions by checking all the options that apply to you.

1. What source do you use to get information about science or research? (Check only one)

- Mass media (TV/radio/Newspaper/Magazine/ etc.)
- Family
- Friends and neighbors
- Church/Mosque
- Internet
- Local Council public announcements
- Other (Please describe)

2. What method do you use to participate in or give your opinion on science communication? (Check only one)

- Attend public or community meetings
- Call the media
- Attend regularly scheduled neighborhood meetings
- Organise or participate in a protest
- Attend public meetings dealing with specific issues
- Other.....

SECTION III

Please tell us whether you agree or disagree with these observations about science communication in your community. (Leave the response blank if you “Don’t Know” or have “No Opinion”)

		Strongly Disagree	Disagree	Agree	Strongly Agree
1.	Information on science is complex, confusing, inaccessible and hard to predict				
2.	Science communication is not accessible and tends to be “one-way” communication of information				
3.	It is important to ensure representative participation in community engagement				
4.	All participants in the community engagement must be held accountable				
5.	Genuine engagement (not just input) is essential				
6.	Change must occur (on both sides) to build trust and participation				

1. In the last year have you attended or participated in at least one

----health camp

-----research project

-----Community health initiative

APPENDIX V:

WORK PLAN

Activity	Month of the year										
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Proposal development and approval											
Design research instruments											
Data collection											
Data analysis											
Interpretation and writing of the draft											
Final thesis write up and submission											