INFLUENCE OF CREDIBILITY OF SOURCES OF COVID 19 MESSAGES ON HANDWASHING BEHAVIOR AMONG YOUTH IN KINONDONI DISTRICT

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Influence of Credibility of Sources of Covid 19 Messages on Handwashing Behavior among Youth in Kinondoni District

By

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation titled: Influence of Credibility of Sources of COVID 19 Handwashing Messages on Handwashing Behaviour Change among Youth in Kinondoni district, Dar es Salaam-Tanzania

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Prof. Phare G.M.Mujinja, BA (Hons), CIH, MPH, M.A (Econ), PhD

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I Janeth Leonard, declare that this dissertation is my own original work and that has not been presented and will not be presented to any other University for similar or any other degree award.

Signature_____ Date_____

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DEDICATION

This study is dedicated to my late father who was always proud of every step I take towards achieving my goals, my mother who has been source of inspiration and gave me reasons to press on, my guard parents (Dr. Angello Mwilawa and Fanikio Bitende) who continuously supply me with moral, spiritual and financial support.

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LIST OF ABBREVIATION

DC	District Commissioner
FBO	Faith Based Organisations
FGD	Focus Group Discussion
HIV	Human Immunodeficiency Virus
MUHAS	Muhimbili University of Health and Allied Sciences
NIMR	National Institute of Medical Research
RC	Regional Commissioner
UNICEF	United Nations Children Emergency Fund
URT	United Republic of Tanzania
USAID	United States Agency for International Development
USD	United States Dollars

DEFINITION OF KEY TERMS

Handwashing behavior; refers to washing hands frequently with running water and soap. Handwashing is the simplest, cost-effective and significant way to prevent transmission most of inflections. However, handwashing behavior is still not embraced by majority of people worldwide. Handwashing behavior in this study was measured by self-reporting whereby respondents were asked to fill questionnaire which asked them directly about their handwashing behavior at critical moments.

Youth; the united nations defines youth as population between 15 to 25, however in Tanzania, people between 15 to 35 years are classified as youth. This a diverse group of people with different needs, skills, (Kimaro, 2017) understanding, attitudes, beliefs and health status among many others. Inadequate youth friendly health services and information is one of the leading health challenges that youth population face in Tanzania. This study therefore intended to look into the aspect of sources of health information to youth and their influence to youth's behaviour change. Youth population in this study was narrowed into four socio-demographic features namely age (18-24 years), sex, education level and occupation.

Source credibility; is defined (Ohanian, 1990, pp 41) as "communicator's positive characteristics that affect the receiver's acceptance of a message" Source credibility can be measured by looking at individual characteristics which are trustworthiness, expertise or competence and attractiveness or acceptability, (Andersson et al., 2019). Cronkhite and Liska (1976; Hellmueller and Trilling, 2012) noted that the credibility of sources depends heavily upon the specific function they perform in specific topic situations for specific listeners.

Sources of message; this study refers sources of message as as individuals who convey handwashing messages to youth. According to (Harkins and Petty 1987; Andersson et al., 2019), message source who communicates the message can impact message credibility, particularly if the source is considered trustworthy and an expert.

COVID 19; is respiratory infectious disease which is transmitted through close contact with respiratory droplets (such as coughing) and by fomites from an infected person. The virus can spread directly from person to person when a COVID-19 case coughs or exhales producing

droplets that reach the nose, mouth or eyes of another person, (WHO, 2020). Other people become infected with COVID-19 by touching these contaminated objects or surfaces, then touc hing their eyes, nose or mouth. The lasting effects of coronavirus in the hands may be erased with handwashing using soap and water, especially when done correctly, (Akpoveso et al., 2020).

Trust; can be defined as the receiver's confidence in and acceptance of the speaker, (Ohanian, 1991). According to (Willemsen, 2012) source trustworthiness is determined by attributions about the motives of a source to share particular information.

Expertise; is defined as "the extent to which a communicator is perceived to be a source of valid information" (Erdogan, 1999, pp. 298 b and McCracken, 1989). Expertise is built by knowledge, experience, and skills the communicator has on the issue he or she is presenting, (Erdogan, 1999, Gilly et al.,1998, Ohanian, 1990 and Tedeschi et al., 1973).

The attractiveness of the source; in one way may be referred to as physical appearance, but in another hand broadly refers to as perceived familiarity, similarity, and likeability (McGuire 1985, Ohanian, 1991 and Nunes et al., 2018; Andersson et al., 2019).

ABSTRACT

Introduction; Credible sources of are helpful in influencing handwashing behavior change. Poor handwashing puts an estimate of one billion people in contacting COVID 19 despite that hand hygiene could reduce the risk of COVID 19 by 16%. Studies have not much documented how credibility of sources of information affect the response of different audiences. This study focused on how the credibility of sources of COVID 19 messages influence handwashing behaviour among youth.

Objective; to determine the extent to which the credibility of sources of COVID 19 messages influence handwashing behavior among youth in Kinondoni district.

Methods; A cross-sectional descriptive design employing was employed. A total of 376 (18-24) youth were randomly selected and interviewed using a questionnaire with open and closed ended questions. Both bivariate and multivariable logistic regression were carried out using SPSS version 23. Chi-Square test and logistic regression were used

Findings; The results show a slight difference between number of male and female respondents. The sample had 51.3% of male respondents aged between 21-24. More than half (60.6%) of respondents had primary education level. Majority who reported to have changed handwashing behavior were female aged between 21-24 (85.8%). Family and the president were reported to be more credible sources of COVID 19 handwashing messages. The Trustworthiness and attractiveness of the source of message were found to have influence behavior change P-value 0.003. Bivariate analysis show that trustworthiness was statistically significantly associated with behavior change (P-value 0.003). Logistic analysis show that both trustworthiness and attractiveness were statistically significantly associated with behavior change.

Conclusion; Trustworthy of sources of COVID 19 handwashing messages influences handwashing behavior change among youth.

Recommendation; Families should be involved in handwashing intervention to that they may be a positive influence to youth on handwashing behaviour change.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Hand hygiene is the simplest and one of the most effective ways to stop spready of viruses. Hand hygiene not only protects people from contacting diseases but also stop transmission to other people and future outbreaks, (UNICEF, 2020). Most transmissions happen after using the toilet, coughing or blowing your nose, playing, handling garbage and touching other contaminated surfaces (Addo, Amegah & Dubik, 2018). The emergence of COVID-19 reminds us of the need to put more emphasis on hand hygiene especially handwashing with soap for protection against coronavirus disease (COVID-19) infection and breaking the chain of transmission, (Fatma, et. Al.,2021).

Compliance to hand hygiene is still very low both in developed and developing countries through which spread of infection remains to be a serious problem, (Jumaa, 2004). A global study on hand hygiene among adolescents which was conducted in 92 countries in the world revealed that among 354,422 adolescents (13–17 years) only 30.3% practised good hand hygiene, (Fatma, et. Al.,2021).

Developing countries face more difficulties in promotion of handwashing due to limited access to basic sanitation facilities, (Jumaa, 2004). For example; (Addo, Amegah & Dubik, 2018) reports that, only 20% of Ghanaians wash their hands with soap. On the other hand, an analysis of the Demographic and Health Surveys (DHS) of 16 countries in sub-Saharan Africa since 2015 indicate that, on average, only 33.5% of households with an observed handwashing place at home have water and soap with national estimates ranging from 5% in Burundi to 64% in Angola, (Antiporta & Jiwani, 2020).

Data from demographic and health surveys in four East African countries (Kenya, Rwanda, Tanzania and Uganda), indicate that age, sex and education of the household head, type of place of residence, number of children, and household wealth are strong predictors of having handwashing facilities in all countries which is one of the indicators of practised handwashing,

(Kisaakye et, al.,2021). A formative research which was conducted in Tanzania indicated that people would tend to clean hands when they were visibly dirty, and that handwashing with soap was an extra burden and many who felt that they were too busy to wash hands with soap, (WSP, 2011).

The AfricaSan report of 2014 identified youth as a silent population which needs more attention in order to promote hygiene in Africa population, (Coombes & Cros 2014). De Buck et, al., (2017) identified youth as both barriers and facilitators of handwashing behaviour promotion in low-income countries. UNICEF, (2020) asserts that youth living in poor, high-density urban areas and informal settlements without access to running water are at risk of getting COVID-19.

1.2 Problem Statement

It is estimated that 19% of the world population do not wash hands with water and soap, (Kumwenda, 2018) despite the fact that hand hygiene is simple, cost effective and strong weapon in ceasing spread of numerous infectious diseases including COVID 19, (Akpoveso et al., 2020). Poor hand hygiene puts an estimate of one billion people in the world at immediate risk of COVID-19, (Mshida, et al., 2020 &World Bank, 2011). However, the systematic review of hand hygiene and its risk for respiratory infection informs that hand hygiene could reduce the risk of COVID 19 by 16%, (Akpoveso et al., 2020). World's poorest countries are amongst the most vulnerable to poor hand hygiene: children and families living in informal settlements, migrant and refugee camps, or in areas of active conflict, (WHO/UNICEF, 2020, Skolmowska, et, al., 2020, WHO, 2018, Erasmus, et, al., 2009, Jumaa, 2004).

Potential courses of poor hand hygiene in many poor countries include lack of handwashing facilities such as clean water and soap, lack of political commitment in advocating for hand washing, lack of community involvement during the planning of handwashing interventions and poor gender inclusion, lack of adequate information on infrastructure and practices, poor coordination by hygiene actors as well as cultural norms and behavioral issues, (UNICEF/WHO, 2020; Cam Dung Le, et al., 2019; Loftus, et al.,2019; Kumwenda, 2018; Mearkle, 2016; Rosenberg; 2016; Jumaa, 2005).

The government of Tanzania in collaboration with other development partners has done several interventions to promote hand hygiene including hand washing among school children, healthcare and communities, (NIMR, 2016; Thomas, et al., 2-13; & WSP, 2011).

Most studies on hand hygiene have focused on hand hygiene compliance, challenges, and practice of hand hygiene among women, primary school children and adolescents as well as healthcare workers (Okoye, 2020; Kuwenda, 2018, Afolabi, 2016; Jumaa 2004, USAID, 2011, Guitart, 2019, Dreibelbis, 2019, Mamunet, al., 2021) while leaving youth population least studied. Studies in Tanzania portray that the knowledge of handwashing is relatively high but the practice is still low regardless of a number of interventions to promote handwashing (WSP, 2011 & 2015, NIMRI, 2016, Thomas et al, 2013 & Taylor, 2009).

Studies have not much documented how communication strategies used to deliver such knowledge affect the response of youth as far as behaviour change is concerned. This study focused on how the credibility of message sources influences behaviour specifically COVID 19 message sources in influence handwashing behavior among youth. Source credibility according to (Evans, 2014), may produce very different effects on thought, confidence, and persuasion.

1.3 Research Questions

1.3.1 Main Question

To what extent has the credibility of sources of COVID 19 messages influenced handwashing behavior among youth in Kinondoni district?

1.3.2 Sub Questions

1. What proportion of youth has changed handwashing behavior due to COVID 19 messages?
2. To what extent has the trustworthiness of sources of COVID 19 messages influenced handwashing behavior among youth?
3. To what extend has the expertise of sources of COVID 19 messages influenced handwashing behavior among youth?
4. To what extent has the attractiveness of sources of COVID 19 messages influenced handwashing behavior among youth?

1.4 Research Objectives

1.4.1 Main Objective

To determine the extent to which the credibility of sources of COVID 19 messages has influenced handwashing behavior among youth in Kinondoni district

1.4.1 Specific Objectives

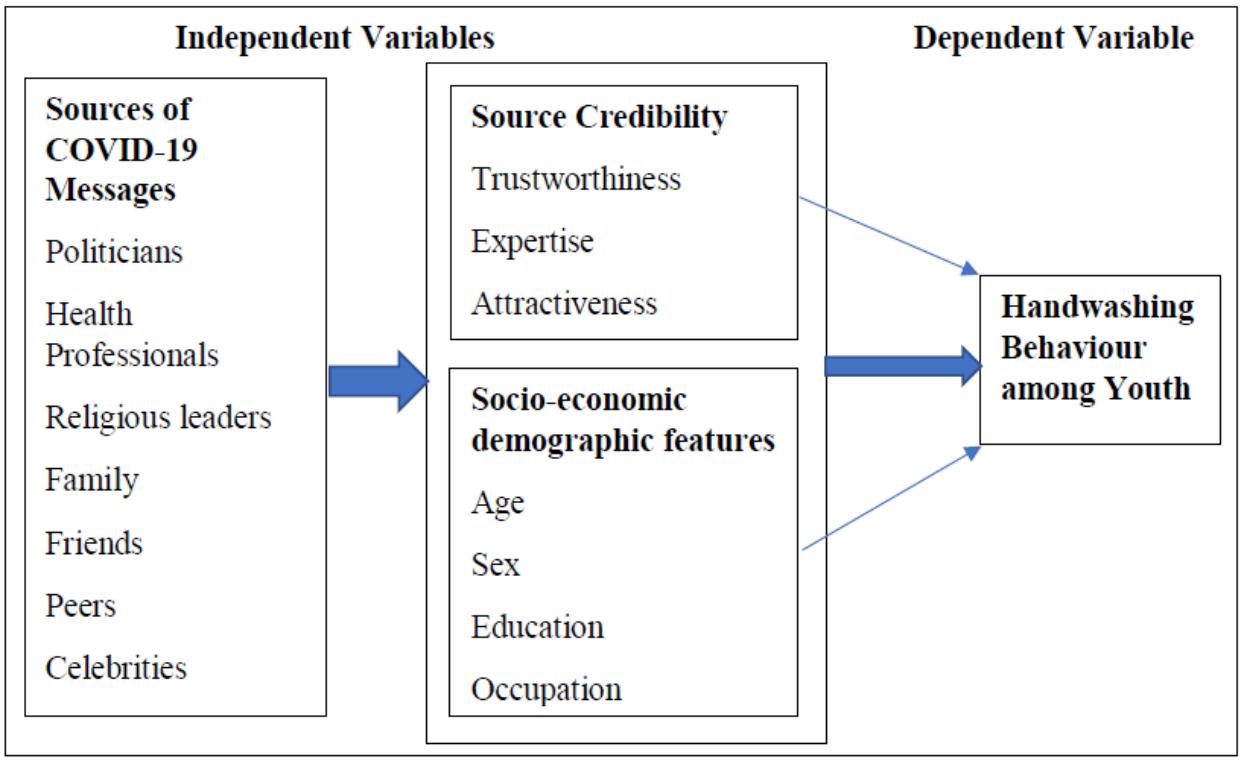
1. To determine the proportion of youth who have changed handwashing behavior due to COVID 19 messages
2. To assess the extent to which the trustworthiness of sources of COVID 19 messages influenced handwashing behavior among youth
3. To determine the extent to which the expertise of sources of COVID 19 messages has influenced handwashing behavior among youth
4. To determine the extent to which the attractiveness of sources of COVID 19 messages has influenced handwashing behavior among youth

1.5 Conceptual Framework of the Study

Figure I illustrate source credibility dimensions and individual characteristics associated with handwashing behavior among youth. Source credibility dimensions; trustworthiness, expertise and attractiveness may influence handwashing behavior among youth. However, these dimensions may all together influence handwashing behavior or independently, (Pornpitakpan, 2004).

Socio-demographic characteristics; age, gender, occupation, water availability may also contribute to handwashing behavior among youth. Youth's reaction to the handwashing messages depends on their assessment of the credibility of the source of the message, however, their assessment may be in other ways influenced by the socio-demographic characteristics.

Figure 1: Conceptual Framework of the Study



1.6 Rationale of the Study

This study has added knowledge to the existing literature on source credibility and its influence on behavior change among youth. Results have also added understanding of influence sources of messages on communicating handwashing behavior change among youth. The study has provided knowledge to behavior change communicators on appropriate strategies to communicate COVID 19 messages to youth. Researchers may use findings from this study as baseline information for further studies on the influence of sources of messages in behavior change communication.

CHAPTER TWO

2.0 LITERATURE REVIE

2.1 Source Credibility and behaviour change

Source credibility may produce very different effects on thought confidence and persuasion, (Evans, 2014). Source credibility is well defined in the theory of source credibility (Hovland, Janis, and Kelly, 1963) which postulates that people or receivers are more likely to be persuaded when the source presents itself as credible (Umeogu, 2012). On the contrary, a low credibility source is assumed to be suspicious rather than sound which may result in the audience's denial of the message, (Evans, 2014).

West, (2019) also asserts that source credibility has an impact on the source's ability to influence the target population which demands communicators to understand credibility characteristics and their effect on message credibility. According to (Hovland and Weiss 1951; Hellmueller and Trilling, 2012) effectiveness of communication is largely determined by the credibility of its source. Therefore, looking at source credibility, one does not only have to emphasize the perceived attributes but also on the communication needs of the receiver or the potential function served by sources, (Hellmueller and Trilling, 2012)

According to (Cornan et al. 2006; Evans 2014) source credibility is defined by three fundamental dimensions namely; trustworthiness, competence or expertise, and goodwill Hovland, Janis, and Kelly, (1953); Smith et al., (2007) on the other hand assert that source credibility is reflected expertise (audience’s assessment of speaker’s ability to make correct statements); and trustworthiness which is receiver’s assessment of validity of speaker’s assertions. Pornpitakpan, (2004) adds that the two fundamental dimensions may have varying effects in assessing source credibility in the sense that a source may be perceived to have great expertise but little trustworthiness, and vice versa.

Although health information is available from many easily accessible sources through various channels, whether individuals trust certain information sources has implications for health communication efforts (Clayman et al., 2010; Thai et al, 2018). According to (Tsafati & Cappella, 2003), people's trust in a source of information affects whether they will expose

themselves to information from that source, whether they will pay attention to that source (Ruppel, 2015), and the likelihood that they will choose to act on the information obtained from a particular source (Huston et al.,2009).

A study on source credibility was conducted in Indonesia. The study investigated the effects of framed-messages and source credibility on the intention to provide six months of exclusive breastfeeding. Data was collected from 279 pregnant women in Indonesia. The findings revealed that while message framing does not have a significant main effect on the variables under study, it does have significant effect when considered in conjunction with iii source credibility (Lincoln University, 2012).

A metal-analysis conducted by (Albarracn at, al., 2010) on the effects of source credibility in the presence or absence of prior attitudes revealed that messages attributed to credible sources induced greater persuasion than did messages attributed to noncredible sources. Moreover, a study on "Finnish adolescents' selection and assessment of health information sources" conducted in Sweden revealed that family members and health professionals are most credible information sources in health problems focusing young people, (Känsäkoski, 2021).

2.2 Handwashing Behaviour Change Communication

Behaviour change communication for improving handwashing with soap can be labor and resource-intensive, yet quality results are difficult to achieve, (Dreibelbis et al., 2015). Therefore, understanding differences in trust in health information sources among different demographics can help public health practitioners optimize the development and implementation of health campaigns and increase the effectiveness of targeted communication efforts by ensuring that the channels used are the ones that the target population (youth) is most likely to trust, (Richardson et al., 2012; Thai et al, 2018 & Redmond et al., 2010).

Bad habits and poor hygiene, persistent behavioural risks, poor basic sanitation, and new and emerging diseases are contributing to a deadly mix that is changing the classic picture of healthy youth, (World youth report 2003). Breinbauer and Maddaleno, (2005) asserts that understanding that some behaviours are unsafe is not enough for youth to adopt positive health behaviour.

Positive empowerment and personal conviction on ability to change can motivate youth to make conscious choices about their lives, (Breinbauer and Maddaleno, 2005 & Kovaleva, 2011).

A cluster-randomised trial was performed in two mandals (sub-district administrative units) in Chittoor district in southern Andhra Pradesh, India, between May 24, 2011, and Sept 10, 2012 to determine the eff ects of a behaviour-change intervention on handwashing with soap. A sample of 14 villages (clusters) were selected by simple random sampling from a list of 57 that were eligible. Outcomes were measured by direct observation in 20–25 households per village at baseline and at three follow-up visits (6 weeks, 6 months, and 12 months after the intervention). The study revealed that a behaviour-change intervention, based on emotional drivers, was effective in significantly increasing the prevalence of handwashing with soap in villages in rural India, (Aunger et al. 2014).

Another study on handwashing behaviour change was conducted in Ghana. The study assessed the impact of different communication channels on reported handwashing behaviour of women in Ghana (Scott et al. 2008; Greenland and Heijnen, 2015). Activities ran for 6 months and included promotion across three major communication channels (TV, radio, and community events). The campaign was evaluated using a structured questionnaire, covering issues of reach, message recall, interpretation and reported behaviour. The study reported that the handwashing campaign reached 82% of the target population. Overall, the TV and radio had greater reach and impact on reported handwashing than community events, (Greenland and Heijnen, 2015).

2.3 Influence of Source Credibility in Behaviour Change

Johnston and Warkentin, (2010) conducted a study on the influence of perceived source credibility on end user atitudes and intentions to comply with recommended IT actions. The study employed a two-stage research design. The first stage of this research involved the collection and analysis of data from 275 IT users at a large public university in the Southeastern United States. The second stage of this research used structural equation modeling to empirically test the conceptual model and its associated hypotheses. It was found out that the elements of source competency, trustworthiness, and dynamism are significant determinants of attitudes and behavioral intentions to engage in recommended IT actions.

Lopez and Sicilian, (2014) in their study on the impact of participation in electronic word of mouth(eWOM) and perceived source trustworthiness on decision making discovered that perceived source trustworthiness is a key factor of word of mouth influence on decision making.

A study conducted by Zhao, Leo, He, Lin & Wen, (2016) found out that there is a relationship between reputation and expertise. Influencers with bigger reputations are perceived as more skilled than influencers with smaller reputations. The relationship is also stronger if the communicator is in his or her expertise category, but nonetheless, there is a correlation between the amount of influence and a category that the influencer has no expertise in, (Andersson et al., 2019).

Lou & Yuan (2019) on the other hand asserts that individuals tend to follow influencers/communicators with whom they identify with and therefore, the followers' perceived similarity to the influencers has a positive effect on their trust in influencer-generated content (Lou & Yuan 2019). Martensen et al., (2018) discovered physical appearance and lifestyle to be particularly important factors in the context of perceived similarity, (Andersson et al., 2019).

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Design

The study used cross-sectional descriptive design.

3.2 Study Area

This study was conducted in Kinondoni strict in Dar es Salaam Region. Dar es Salaam is the most populated region in Tanzania with an estimate of 4 million people according to the 2012 housing and demographic census. Kinondoni district has the largest population compared to other districts in Dar es Salaam reflecting on 2012 housing and demographic census which was 1,755,049. Kinondoni district has 20 administrative wards. Kinondoni district was randomly selected as the study area since it has similar features of the study population as other districts in the region. Dar es Salaam region was particularly selected because, according to report of 2020 on COVID 19 status in Tanzania, the region had the highest prevalence of COVID-19 cases compared to other regions in the country, (URT, 2020).

3.3 Study Population

The study population included all youth aged 18-24 who reside in Kinondoni district. It included both boys and girls in school and out of school, those with formal and informal education as well as those who were employed and non-employed. According to (Kumwenda, 2019), hygiene promotion campaigns are most effective when young population are involved as beneficiaries and as agents of behavior change with their families and communities.

3.4 Sample Size Estimation

This study used single proportion formula to obtain sample size where P is 50%. The study used 50% P value because there were no studies which specifically focused on youth in the context of COVID -19. The study sample was calculated by using Kish and Leslie formula for cross-sectional studies

$$N = \frac{Z^2 P(1-P)D}{E^2}$$

Whereby:

N= Minimum sample size required

Z= Standard normal deviation, usually set at 1.96 which correspond to 95% confidence interval.

P= 0.5, risk averse of population.

E= 5% setting the margin of error 5% and considering 95% confidence level in estimate proportion of iCHF member who are not enrolled.

D= Design effect of 1.00

$$N = \frac{(1.96)^2 x 0.5 x (1-0.5)}{(0.05)^2}$$

N=384.2

Adding non-response rate 10%

Therefore, sample size for this study was supposed to be 422.

A total of 376 youth were interviewed which was 98% of the required sample.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

The study included both male and female youth aged 18-24 in Kinondoni district.

3.5.2 Exclusion Criteria

The study excluded all youth aged 18-24 who are too sick to respond and those had never come across COVID 19 handwashing messages

3.6 Sampling Procedure

Study participants were selected using Multi-stage sampling technique. "Multistage sampling entails two or more stages of random sampling based on the hierarchical structure of natural clusters within the population" (Sedgwick, 2015). The study used three clusters which are wards, streets and households. The following procedure was followed;

i. A list of 20 wards in Kinondoni district was obtained from Kinondoni district council.
ii. Five wards were selected randomly from 20 wards in the district which were Kawe, Kijitonyama, Mbezi Juu, Makumbusho and Mikocheni.
iii. A list of all streets in each selected ward was obtained from ward offices.
iv. Two streets were randomly selected from a list of streets in each ward.
v. Potential participants were randomly selected from households in selected streets from the first to last household westward.

3.7 Collection Tools

3.7.1 Collection of Quantitative data

Questionnaire with closed and open-ended questions was used to obtain information from youth in Kinondoni district aged 18-24. The questionnaire was developed in English language then translated into Kiswahili. A Kiswahili version questionnaire was used to collect data.

The questionnaire included individual characteristics, measurement of source credibility (trustworthiness, expertise, and attractiveness) which was disintegrated into honesty, believability and reliability, knowledge, skills, experience, similarities, appearance, and likeability. The questionnaire also involved critical moments for handwashing in the context of COVID 19, as defined by WHO which was used to measure reported handwashing behaviour. Question about critical moments for handwashing was asked spontaneously. Part of the question was adopted from (Hu, 2015).

3.8 Study Variables

3.8.1 Dependent Variable

Handwashing behavior among youth

3.8.1 Independent Variables

i. Trustworthiness of sources of COVID 19 messages will be divided into three variables namely honest, believability and reliability
ii. Expertise of sources of COVID 19 messages will be divided into three variables; skills, knowledge. Experience
iii. Attractiveness of sources of COVID 19 messages which will include likeability, similarities, and appearance
iv. Sources of COVID 19 messages which will include politicians, health professionals, religious leaders, family, friends, peers, and other random people
v. Socio-demographic characteristics associated with handwashing behavior including age, gender, education, occupation, availability of water facilities.

3.9.2 Recruitment of Research Assistants

Five research assistants with experience in data collection were recruited. They were responsible for collecting data from five selected wards with close supervision by the researcher. Each research assistant collected information from one ward. Research assistants were trained on the purpose of the study, objective and data collection procedures for the study.

3.9.3 Pre-testing Data Collection Tools

The questionnaire was developed in English then translated in Kiswahili. The Kiswahili version of questionnaire was tested in Ilala district. Pre-testing was done among youth aged 18-24. Pre-testing was done by the researcher to ensure appropriate interpretation and data validity. Pre-testing also checked whether questions were relevant, understood, consistent, and logical to obtain the required information. Pre-testing of questionnaire helped to assess the acceptance of the tool to the target population.

3.9.4 Data Collection Procedure

Data Collection Procedure

i. Questionnaires were distributed to research assistants and each research assistant was assigned to a single ward.
ii. Potential respondents were identified from households and ask for their participation in the study
iii. Before filling out the questionnaire, the research assistant explained to the respondent the objectives of the study.
iv. The research assistant asked the respondent to fill consent form to express his or her willingness to participate in the study
v. The respondents were asked to sit aside for administration of the questionnaire
vi. After filling the questionnaire, the research assistant thanked the respondent for his or her participation in the study

3.9.5 Data Management

After data collection, the principle researcher cross-checked with all questionnaires and recorded discussions to ensure completeness and accuracy of data collected. Rechecking of collected data was done on daily basis to allow tracking of missing information. No missing data was found from the questionnaires filled.

3.9.6 Data Analysis

Cross-sectional descriptive and bivariate analysis was used to analyze dependent and independent variables and establish the relationship between the variables. Multi-variable regression analysis was used to determine the association between independent variables and handwashing behavior among youth. Chi-square was used to test relationships between variables. Statistical significance was set at $P< 0.05$. Data was presented using frequency and proportions. Data was analyzed using Software Package for Social Science (SPSS) version 23 whereas two ways tables were used to establish the association between dependent and independent variables. Continuous and categorical variables were presented using frequency and percentage. Collected data were analyzed basing on specific objectives as follows

i. Proportion of Youth Who Have Changed Handwashing Behavior due to Sources of COVID 19 Messages

Data analysis was done to find out how many youth have changed handwashing behavior after receiving handwashing messages from various sources of COVID 19 messages. The study used critical moments for handwashing in the context of COVID 19 as defined by WHO to measure handwashing behavior among youth in Kinondoni district. Respondents were asked to spontaneously name critical moments when they wash hands as a measure to prevent the spread of COVID 19, a list of five critical moments which are closely related to COVID 19 as adopted from WHO guideline was used to analyse handwashing behavior change as identified below;

i. After coughing or sneezing
ii. Coming home from public places
iii. After touching common surfaces such as door handles, tables, chairs, working tools
iv. Before eating or feeding others
v. After shaking hands

Five criteria for measuring handwashing behavior was given a weight equal to One. The total weight for all five items was equal to Five. Participants who scored less than Three were considered not to have changed behavior. Participants who scored three or more were considered to have changed behavior. Therefore, the dependent variable was measured in descript; I (YES)= changed behavior and 0 (NO) unchanged behavior.

ii. The Extent to which Trustworthiness of Sources of COVID 19 Messages has Influenced Handwashing Behavior among Youth

Source Trustworthiness was measured by three variables namely; honesty believability and reliability. The frequencies of the three variables were tabulated (YES/NO). Participants who indicated a YES in all three variables were categorized as valuing trustworthiness of the message sources. Participants who l indicated NO to either of the variables were categorized as not valuing trustworthiness of the message sources. The frequency of trustworthiness was run by participants who said YES and those who said NO. Thereafter cross-tabulation between

Trustworthiness (YES/NO) and Behavior Change (YES/NO) were performed. A Chi-square test was run to chuck the association between trustworthiness and handwashing behavior.

iii. The Extent to which Expertise of Sources of COVID 19 Messages influenced Handwashing behavior among Youth

Source Expertise was measured by three variables; knowledge, experience and skills. Frequencies of the three variables were tabulated (YES/NO). Participants who indicated YES in all variables were categorized as valuing expertise of message sources. Participants who indicated NO to either of the variables were categorized as not valuing source expertise. Frequencies of expertise were obtained from participants who said YES and those who said NO. Cross-tabulation between expertise (YES/NO) and behavior change (YES/NO) was conducted. A Chi-square test was run to check the association between expertise and handwashing behavior.

iv. The Extent to which Attractiveness of Sources of COVID 19 Messages has Influenced Handwashing Behavior among Youth

Source attractiveness was measured by three variables; similarities, likeability and appearance. Frequencies of the three variables were tabulated (YES/NO). Participants who indicated YES in all variables were categorized as valuing attractiveness of message sources. Participants who indicated NO to either of the variables were categorized as not valuing source attractiveness. Frequencies of attractiveness were run by participants who said YES and those who said NO. Cross-tabulation between attractiveness (YES/NO) and behavior change (YES/NO) was conducted. A Chi-square test was run to check the association between source attractiveness and handwashing behavior.

Thereafter, a multi-variable regression analysis was conducted to find relationship between dependent and independent variables. The dependent variable; behavior change=YES/NO. The independent variables are as follows; trustworthiness, attractiveness, sources of COVID 19 messages, Age, Sex, Education and Occupation.

3.7.7 Data Reliability and Validity

Data reliability means consistency of study results over time and accurate representation of the whole population, (McCrae et al., 2011). For the purpose of this study, questionnaire and topic guide were observed by the supervisor. A big body of knowledge of questions was borrowed from literature and previous studies in handwashing behavior.

Data validity refers to how well data collection instruments measures what it was intended to measure, (Saunders et al. 2007). The data collection tools were pre-test in different sample units with the same population. Moreover, for internal validity, the study used self-reporting approach of data measuring handwashing behavior coupled with rapid observation of presence of running water and soap in households.

3.8 Ethical Considerations

The researcher obtained ethical clearance from the Institutional Review Board at Muhimbili University of Health and Allied Sciences (MUHAS).

Main ethical consideration for this study lies upon anonymity and confidentiality of respondents. The researcher ensured that information obtained from this study was only to be used for academic purpose by the University or otherwise by consent of study participants

The study highly valued the importance of informed consent. Participants were informed about the study. The participants also filled consent form before commencement of the study

The whole process of data collection was explained to participants before interview or focus

CHAPTER FOUR

4.0 RESULTS

4.1 Description of study sample

A total of 376 youth aged 18 to 24 were enrolled in the study from five different wards in Kinondoni district namely; Makumbusho, Kawe, Kijitonyama, Mikocheni, and Mbezi Juu. We dropped youth who said they were not aware of COVID 19 handwashing messages and those who were too sick to be interviewed.

4.2 Socio-economic demographic characteristics of respondents

There were more male respondents (193) than women respondents (183) among study participants. Table 1 shows that majority (77.1%) of respondents belonged to a (21-24) age group. More than half (60.6%) of respondents had primary level of education while only few (4.3. %) respondents had University education followed by respondents with informal education (4.8%). Respondents had diversity of occupation where by majority (28.3%).

Table 1: Socio-economic demographic characteristics of respondents (N=376)

VARIABLE	n	Percent
Age group		
18-20	86	22.9
21-24	290	77.1
Sex		
Male	193	51.3
Female	183	48.7
Education		
Primary	228	60.6
Secondary	70	18.6
Tertiary	44	11.7
University	16	4.3
Informal education	18	4.8
Occupation		
Self-employed	106	28.3
Boda boda rider	42	11.2
Police	2	0.5
Teacher	4	1.1
Student	77	20.5
Other occupation	79	21.0
Unemployed	66	17.6

4.3 Proportion of Youth who Reported to have Changed Handwashing Behavior

The results show 31.9% of youth reported to have changed handwashing behavior after they had heard COVID 19 handwashing messages (Ci 27.1-36.7%).

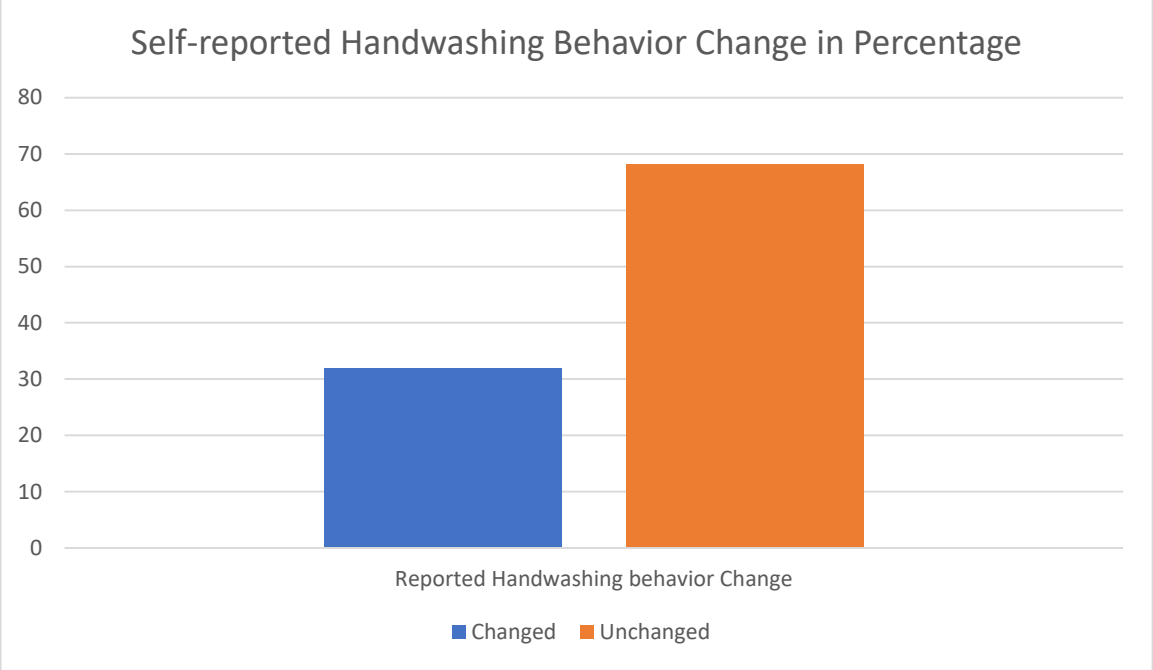


Figure 2 Proportion of youth who repored to have changed handwashing behavior

Results also show that out of 120 youth who reported to have changed handwashing behavior 85.5% belong to age group 21-24, (P-value 0.042). Results also indicate that majority of youth who have changed behavior female were (53.3%), (P-value 0.202).

A cross-tabulation between education and behavior change shows that majority who have changed behavior had primary level of education, however, the same education level had a bigger number of people who did not change bahaviour (60.5%) of all respondents who did not change behavior, (P-value 0.099).

It was also found out that out of 120 youth who have changed behavior, majority (36/32.6%) were self-employed followed by students and unemployed youth. Bodaboda riders, teachers and

police officers made a small percentage of those who reported to have changed behavior. With regard to those who reported to have not changed behavior, entrepreneurs are still the majority followed by youth with other different occupations (P-value 0.003). No single teacher and police officer follow under the category of unchanged behavior.

Table 2: Variation of Self-reported handwashing behavior by selected demographic characteristics

	HANDWASHING BEHAVIOR		
VARIABLE	CHANGED	UNCHANGED (n/%)	P-value
Age (years)			
18 -20	17 (14.2)	69 (27)	0.042
21-24	103 (85.8)	187 (73)	
Sex			
Male	56 (46.7)	137 (53.5)	0.202
Female	64 (53.3)	119 (46.5)	
Education			
Primary	3 (2.5)	12 (4.7)	
Secondary	19 (15.8)	51 (19.9)	
Tertiary	21 (17.5)	23 (9)	0.099
University	73 (60.8)	155 (60.5)	
Informal	4 (3.3)	15 (5.9)	
Occupation			
Entrepreneur	39 (32.6)	64 (24.9)	
Boda boda	8 (6.7)	34 (13.3)	
Police	2 (1.7)	0	
Other occupation	19 (15.8)	58 (22.7)	0.003
Student	27 (22.5)	52 (20.3)	
Jobless	21 (17.5)	48 (18.8)	
Sources of Message			
Family	66 (66.9)	144 (56.3)	
President	37 (31.4)	89 (34.8)	0.501
Other sources	16 (12.7)	24 (9)	

4.3.5 Sources of Covid-19 handwashing Messages who are more appealing to youth

Table 3 show that sources identified by respondents included health experts, neighbours, family members, religious leaders, friends and colleagues, local government leaders, minister of health, president, other political leaders and social media. Out of 376 respondents, 36.1% had heard the message from family members followed by the president 25% of all respondents and health experts 14.1%. Only 0.3% of all respondents had heard the message from local government leaders.

Table 3: Sources of COVID 19 handwashing messages identified by respondents

Source of Message	Frequency	Percent
Family	136	36.1
Media	24	6.4
Health experts	53	14.1
Neighbours	8	2.1
Religious leaders	36	9.6
Colleagues	7	1.9
Friends	7	1.9
Political leaders	8	2.1
Mobile networks	2	0.5
President	94	25.0
Local government chairman	1	0.3
Total	376	100.0

4.4 Trustworthiness of Sources of COVID 19 Messages influence and Handwashing Behavior

4.4.1 Source trustworthiness

Table 4 shows that 41% 0f all respondents mentioned family as their trusted source of COVID 19 handwashing messages followed by the president (27.7%). Members of parliament were mentioned by small number (0.5%) of respondents.

Table 4: Types of Sources of Covid-19 Messages who were Trusted by Respondents

Sources of COVID 19 messages	Frequency	Percent
Local religious leaders	6	1.6
Family members	154	41.0
PM	6	1.6
President	104	27.7
MP	2	0.5
Opposition leaders	12	3.2
Ruling party leaders	4	1.1
Village/ward leaders	6	1.6
Doctor	48	12.8
Clinical officer	4	1.1
Nurse	4	1.1
Religious leaders	12	3.2
Minister of health	14	3.7
Total	376	100.0

4.4.2 Measurement of source trustworthiness

Table 5 indicates in all three dimensions of source trustworthiness family was mentioned by more respondents; honesty (30%), believability (34%) and reliability (30%), followed by the president; honest (25%), believability (24%) and reliability (24%).

Table 5: Respondents' assessment of trustworthiness of sources of COVID 19 handwashing messages (n=376)

	HONESTY (%)			BELIEVABILTY (%)			RELIABILITY (%)		
Sources of COVID 19 Messages	YES	NO	I am not sure	Yes	No	I am not sure	Yes	No	I am not sure
Local religious leaders	1	0	0.5	1.5	0	0	1	0	0.5
Family members	30	4	8.5	34	3	6	30	4	8.5
PM	2	0	0	1.5	0	0	2	0	0
President	25	0	3	24	0.5	3	25	0	3
MP	0.5	0.5	0	0.5	0.5	0	0.5	0.5	0
Opposition leaders	0.5	0	0	0.5	0	0.5	0.5	0	0
Ruling party leaders	1	0	0	1	0	0	1	0	0
Village/ward leaders	0.5	0	1	2	0	0	0.5	0	1
Doctor	10	0	3	11	0	1.5	10	0	3
Clinical officer	0.5	0.5	0	1	0	0	0.5	0.5	0
Nurse	0	0	1	1	0	0	0	0	1
National religious leaders	3	0	0	3	0	0	3	0	0
Minister of health	4	0	0	4	0	0	4	0	0
Total	78	5	17	85	4	11	78	5	17

Table 6 indicates that more (36.7%) youth who had received messages from trustworthy source reported to have changed handwashing behavior compared to 20.5% of youth who had received message from trustworthy source yet they did not report to have changed handwashing behavior, (OR=0.445, P =0.002).

Table 6: Influence of source trustworthiness on handwashing behavior

	Reported behaviour handwashing behaviour change		
VARIABLE	Changed (n/%)	Unchanged (n/%)	P-Value
Trustworthy	97 (36.7)	167 (63.3)	0.002
Untrustworthy	23 (20.5)	89 (79.5)	

4.6 Sources expertise and handwashing behavior

Results show that 34.6% of all respondents identified the presidents as a source with most expertise to deliver COVID-19 handwashing message to youth followed by doctors (27.7%). Table 7 indicate that doctors were mentioned by more respondents (27.7%) and family (26.1%).

Table 7: Types of sources who have most expertise to deliver COVID-19 handwashing messages

Sources of COVID 19 handwashing messages	Frequency	Percent
Local religious leaders	4	1.1
Family members	98	26.1
PM	18	4.8
President	130	34.6
Opposition leaders	4	1.1
Doctor	104	27.7
Clinical officer	6	1.6
Minister of health	12	3.2
Total	376	100.0

Measurement of Expertise

Table 8 shows that the president was assessed by more respondents in all three dimensions of source expertise; knowledge (33.5%) experience (32%) and skills (32%). Not more than 1% of all respondents said mentioned local religious leaders, opposition party leaders and clinical officers.

Table 8: Respondents' assessment on expertise of sources of COVID 19 handwashing messages (n=376)

Sources of COVID 19 handwashing messages	Knowledge (%)			Experience (%)			Skills (%)		
	YES	NO	I am not sure	Yes	No	I am not sure	Yes	No	I am not sure
Local religious leaders	1	0	0	1	0	0	1	0	0
Family members	23	0	4	21	1.5	5	22.8	0	4.8
PM	3	0	0.5	1.5	1	0.5	2.7	0	0.5
President	33.5	0	1.5	32	0	3	32	0	2.7
Opposition leaders	1	0	0	1	0	0	1	0	0
Health experts	23	0.5	2	22	0.5	3	22.8	0.5	2.7
Clinical officer	0.5	0	1.5	0.5	0	1	0.5	0	1
Minister of health	5	0	0	5	0	0	5	0	0
Total	90	0.5	9.5	84	3	13	87.8	0.5	11.7

Table 9 shows that number of youths who reported to have changed handwashing behavior after receiving the message from people with expertise was smaller (32.2%) compared to those who did not change (67.5%), (P-value 0.625).

Table 9: Influence of source expertise on handwashing behavior among youth

	Reported handwashing Behavior Change		
VARIABLE	Changed (n/%)	Unchanged (n/%)	P-Value
Expertise	100 (32.2%)	208 (67.5)	0.625
No expertise	20 (29.4%)	48 (70.6%)	

4.7 Source attractiveness and handwashing behavior

Findings indicate that 44.7% mentioned the president as one who is most attractive in informing them about handwashing. Family members were also identified by 28.7% of all respondents followed by doctors who were mentioned by 10.6% of all respondents. Members of parliament, friends and celebrities were each named by only 0.5% of all respondents.

Table 10: Source attractiveness

Source Attractiveness	Frequency	Percent
Local religious leaders	4	1.1
President	168	44.7
PM	12	3.2
Family members	108	28.7
MP	2	.5
Opposition leaders	10	2.7
Village/ward leaders	2	0.5
Doctor	40	10.6
Clinical officer	4	1.1
Minister of health	22	5.8
Friends	2	.5
Celebrities	2	.5
Total	376	100.0

4.7b Respondents' assessment of source attractiveness.

Table 11 shows that the president was assessed by more respondents as more attractive source in in all dimensions; appearance (43%) similarities (36%) and likeability (43.5%).

Table 11: Respondents' assessment of source attractiveness (n=376)

	APPEARANCE (%)		SIMILARITIES (%)		LIKEABILITY (%)	
Sources of COVID 19 handwashing messages	YES	NO	YES	NO	YES	N0
Local religious leaders	1	0	1	0	1	0
President	43	2	36	9	43.5	2.5
PM	3	0	3	0	3	0
Family	28	1	22	7.5	26	1.5
MP	0.5	0	0.5	0	0.5	0
Opposition leaders	2	1	2	0.5	3	1
Village/ward leaders	0.5	0	0.5	0	0.5	0
Doctor	11	0	10	0.5	10	0
Clinical officer	1	0	1	0	0.5	0.5
Minister of health	5	0	5	0.5	5	0
Siblings	0.5	0	0.5	0	0.5	0.5
Celebrities	0.5	0	0.5	0	0.5	0
Total	96	4	82	18	94	6

The results show that many youth (69.8%) reported to have changed handwashing behavior after receiving handwashing message from an attractive source, however, (30.2%) received message from attractive sources but they did not report to have had changed handwasging behavior (P-value 0.161).

Table 12: Influence of source attractiveness on handwashing behavior change

	Reported handwashing behaviour change		
VARIABLE	Changed (n/%)	Unchanged (n/%)	P-Value
Attractive	210 (69.8)	92 (302)	0.161
Not attractive	46 (61.3)	29 (38.7)	

4.8 Factors associated with handwashing behavior change among youth

Logistic analysis shows that youth aged between 21-24 were two times more likely to adopt handwashing behavior compared to youth aged between 18-20. Age was found to be statistically significantly associated with handwashing behavior change (P-value 0.021). Sources that were trustworthy were found to be two times more likely to influence handwashing behavior change (aOR 2.231). Trustworthiness of sources of COVID 19 handwashing messages were found to be statistically significantly associated with handwashing behavior among youth (P-value 0.005)

Table 13: Multivariate analysis of factors associated with handwashing behaviour change

Variable		aOR	95% CI		P-value
			Lower Bound	Upper Bound	
Sex	Male Female	1.251	0.789	1.984	0.340
Age	18-20 21-24	2.056	1.117	3.785	0.021
Education	Above secondary Secondary and below	1.241	0.711	2.165	0.447
Occupation	Employed Unemployed	1.264	0.787	2.032	0.333
Sources	Other sources	0.624	0.283	1.378	0.243
	Family	0.934	0.564	1.548	0.792
	President				
Trustworthiness	Untrustworthy Trustworthy	2.231	1.281	3.885	0.005
Attractiveness	Unattractive Attractive	0.591	0.325	1.074	0.084

CHAPTER FIVE

5.0 Discussion

This chapter presents discussion of the results of the study. The of the purpose of the study was to determine how credibility of sources of COVID 19 handwashing messages influenced handwashing behavior among youth in Kinondoni district. The chapter the proportion of youth who had changed behavior due to COVID 19 handwashing messages, the influence of trustworthiness, expertise and attractiveness of sources of COVID 19 handwashing messages on behavior change among youth.

5.1 **Proportion of youth who reported to have changed behaviour due to COVID 19 handwashing messages**

5.1.1 Number of youths who reported to have changed behavior

This study shows that a small number of youths reported to have adopt handwashing behavior as recommended by WHO. This implies that youths still do not consider handwashing as a very significant way to prevent spread of a number of diseases. A global study on hand hygiene among adolescents which was conducted in 92 countries in the world reported that among 354,422 adolescents, only 30.3% practised good hand hygiene, (Fatma, et. Al.,2021).

A small number of youths who reported to have changed handwashing behavior also gives an implication that there is poor handwashing behavior among youth in Kinondoni district. A study on handwashing washing in low- and middle-income countries reported that handwashing is still as low as of 30-40% in intervention groups, (Dreibelbis, 2016).

5.1.2 Sources of COVID-19 handwashing messages

This study shows that majority of respondents received handwashing messages from family members and the president. Very few respondents mentioned neighbours, friends, religious leader and political leaders. The question which lies here is, are the said sources credible enough to influence handwashing behavior among youth. Umeogu, (2012) argues that people or receivers are more likely to be persuaded when the source presents itself as credible. It was then revealed that family and the president were more credible sources of COVID 19 handwashing messages.

5.2 Trustworthiness of sources of COVID 19 messages and handwashing behavior among

Majority of respondents asserted that they trust family most as their sources of handwashing messages followed by the president and the doctors. Members of parliament and the minister of were mentioned by very few respond as their trusted source of COVID 19 handwashing message. When measured against behavior change, a statistical significance was found on the association of source trustworthiness and handwashing behavior change among youth. This implies that family is the primary trusted source of behavior change messages to youth and if coupled with the top leader of the country the impact might be more profound.

Benes et al., 2018; Baiocchi-Wagner & Talley, (2013); Henrick, Brookmeyer, Shirer & Shahar, (2006) reported that family unit still plays an important role in the development of attitudes, beliefs and behaviors related to health, particularly through family health communication. On the other hand, a study on the potential for political leadership in HIV/AIDS communication campaigns in Sub-Saharan Africa revealed that political system, particularly through elected officials such as the President and Prime Minister, can have an influence on people's knowledge and attitudes with regard to HIV transmission, (Coates et al., 2017).

5.3 Expertise of sources of COVID 19 messages and handwashing behavior

The president was found to be more influential to youth in terms of expertise. This implies that president's reputation added an advantage to influence handwashing behaviour change among youth. A study by by Zhao et al (2016); Andersson et al., (2019) revealed that influencers with bigger reputations are perceived as more skilled than influencers with smaller reputations.

5.4 Attractiveness of sources of COVID 19 messages and handwashing behavior

The family and the president were found to be more attractive in communicating COVID 19 handwashing messages to youth. This implies that youth can easily identify with their families and the president's character. However, a Chi-square test found no statistically significant between expertise of sources and handwashing behaviour change. These findings are contrary to other studies conducted on influence of attractiveness. A study by (Lou & Yuan 2019) reported that individuals tend to follow influencers/communicators with whom they identify

with and therefore, the followers' perceived similarity to the influencers has a positive effect on their trust in influencer-generated content.

5.6 Limitation of the study

Due to nature of handwashing behavior which is not a single behavior but variety of behaviours that take place at different times of day with regular or irregular patterns, the main limitation was obtaining evidence of the behavior hence the study relied on self-reporting handwashing behavior.

The study focused on few demographic characteristics of youth in Kinondoni district. This would have denied information on the influence of other demographic characteristics of youth which are not featured in this study.

The study used small sample as representative sample hence may be not the reality of the behavior in general youth population in Kinondoni district

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Handwashing behavior among youth in Kinondoni district is generally poor. Youth are likely to change behavior as age increases.

Sources trustworthiness can influence handwashing behavior change among youth. Family and the president are more trusted sources of COVID 19 message to youth and they can influence positive handwashing behavior

Source expertise has no significant influence on youth' handwashing behavior change. However, the president was identified as a source with more knowledge, skills and experience to inform youth about handwashing behavior in the era of COVID 19

Source attractiveness has little influence on handwashing behaviour among youth whereby the president and family members appear to be more attractive to youth in informing them about handwashing in COVID 19 era.

Families and the president were generally identified as credible sources of COVID 19 handwashing messages targeting youth.

6.2 Recommendation

Kinondoni district should involve more youth in handwashing behavior change interventions.
Families should be more involved in handwashing campaigns so that they can gain more knowledge on importance of handwashing and eventually influence more youth in to change.

This study focused on handwashing at household level, further studies should explore handwashing behavior in public places.

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APPENDECES

APPENDEX I.

SECTION A

Socio-economic demographic Characteristics (fill the blank or Tick appropriate answer)

Name of Ward…….. Questionnaire Number……

Name of Street……. Date of Interview……

House Number…….

Name of Interviewer……

Age (years)…….

1. Gender
    a) Male
    b) Female
2. Education level
    a) Primary school
    b) Secondary school
    c) Tertiary
    d) University
    e) Informal education
3. Occupation……..
4. Availability of running water and soap in the house
    a) Yes
    b) No

SECTION B.

Proportion of youth who have changed behaviour after receiving COVID 19 handwashing messages

5. Common health behaviour that you perform daily? (*put a tick in all appropriate answers*
    a) Tooth brasging
    b) Washing hands frequently
    c) Exercising
    d) Resting
    e) Eating
    f) Other behaviours_____

6. Have you ever been told to wash hands in your life time?
    g) Yes
    h) No
7. Who has been telling you to wash hands?
    a) Mother
    b) Father
    c) Sister
    d) Brother
    e) House maid
    f) Others (mention)…….
8. Have you ever come across handwashing message during COVID 19?
    a) Yes
    b) No
9. What was the message about?
    a) Reminding you to wash hands frequently with running water and soap?

b) Informing critical moments when you should wash hands?
c) Telling you the benefit of washing hands frequently with running water and soap?
d) Telling you the danger of not washing hands frequently with running water and soap?
e) Other ……

10. Who was the source of the message?……..
11. After you have received handwashing message in COVID 19 context, at what occasion do you wash hands? (name five occasions)
    i. ……
    ii. ……
    iii. ……
    iv. ……
    v. ……
12. Which behaviours among those you have mentioned you have managed to sustain?
    i. ……
    ii. ……
    iii. ……

13. Is there any change in your handwashing before after receiving handwashing message in the context of COVID 19?
    a) Yes
    b) No
14. What has influenced a change in handwashing behaviour? if there is any change
    a) The message
    b) The source of the message
    c) The risk of the disease

SECTION C

Trustworthiness of Sources of COVID 19 Messages

1. In your own assessment what source is more trustworthy to give handwashing message to youth?

SOURCE OF MESSAGE	ASSESSMENT	
	YES	NO
Politicians		
President		
Prime minster		
Minister of health		
Member of Parliament		
Leaders of opposition parties		
leaders of ruling part		
RC		
DC		
Village/ward leaders		
Health professionals		
Doctors		
Nurses		
Physicians		
Sanitation officers		
Religious leaders		
National leaders		
Local leaders		
Family members, friends and peers		
Parents or guardians		
Siblings		
Relatives		
Friends		
Peers		
Celebrity		

2. Do you consider trustworthiness to be important attribute of sources of handwashing messages in the context of COVID 19?
    a) Yes
    b) No
3. What is your assessment of the trustworthiness of the source you have selected in informing you about washing hands during COVID 19?

ATTRIBUTES	ASSESSMENT	
	YES	NO
Honesty		
Believability		
Reliability		

SECTION D

Expertise of Sources of COVID 19 Messages

4. Do you consider expertise to be important attribute of sources of handwashing messages in the context of COVID 19?
    c) Yes
    d) No
5. What is your assessment of the attribute of the person that informed you about washing hands during COVID 19?

ATTRIBUTES	ASSESSMENT	
	YES	NO
Skilled		
Knowledgeable		
Experienced		

6. In your own assessment what source has more expertise to give handwashing message to youth?

SOURCE OF MESSAGE	ASSESSMENT	
	YES	NO
Politicians		
President		
Prime minster		
Minister of health		
Member of Parliament		
Leaders of opposition parties		
leaders of ruling part		
RC		
DC		
Village/ward leaders		
Health professionals		
Doctors		
Nurses		
Physicians		
Sanitation officers		
Religious leaders		
National leaders		
Local leaders		
Family members, friends and peers		
Parents or guardians		
Siblings		
Relatives		
Friends		
Peers		
Celebrity		

SECTION E

Attractiveness of Sources of COVID 19 Messages

7. Do you consider attractiveness to be important attribute of sources of handwashing messages in the context of COVID 19?
    e) Yes
    f) No
8. What is your assessment of the person that informed you about washing hands during COVID 19?

ATTRIBUTE	ASSESSMENT	
	YES	NO
Good appearance		
Likeable		
Similar		

9. In your own assessment what source is more attractive to give handwashing message to youth?

SOURCE OF MESSAGE	ASSESSMENT	
	YES	NO
Politicians		
President		
Prime minster		
Minister of health		
Member of Parliament		
Leaders of opposition parties		
leaders of ruling part		
RC		
DC		
Village/ward leaders		
Health professionals		
Doctors		
Nurses		
Physicians		
Sanitation officers		
Religious leaders		
National leaders		
Local leaders		
Family members, friends and peers		
Parents or guardians		
Siblings		
Relatives		
Friends		
Peers		
Celebrity		

SEHEMU A

Jina la Kata…….. Namba ya dodoso……

Jina la Mtaa……. Tarehe ya Mahojiano……

Namba ya Nyumba…….

Jina la anayehoji……

Sifa za anayejibu dodoso (Jaza sehemu iliyo wazi au weka amala ya vema mbele ya jibu sahihi)

Umri (miaka)…….

15. Jinsia
    c) Me
    d) Ke
16. Kiwango cha elimu
    f) Elimu ya msingi
    g) Elimu ya sekondari
    h) Elimu ya ufundi
    i) Elimu ya chou kikuu
    j) Elimu isiyo rasmi
17. Ajira……..
18. Ukaribu wa maji
    a) Karibu sana
    b) Karibu
    c) Mbali
    d) Mbali san
19. Uwepo wa maji tiririka na sabuni nyumbani
    c) Ndiyo
    d) Hapana

SEHEMU B.

Idadi ya vijana wanaonawa mikono mara kwa mara na maji tiririka baada ya kupata jumbe za kunawa mikono katika kipindi cha uwepo wa ugonjwa wa COVID 19

20. Tabia muhimu za utunzaji afya unazofanya kila siku ni zipi? (*weka alama vema mbele ya majibu yote sahihi*)
    i) Kupiga mswaki
    j) Kunawa mikono
    k) Kufanya mazoezi
    l) Kupumzika
    m) Kula chakula
    n) Tabia nyingine_____
21. Umewahi kuambiwa/kupata ujumbe wa kunawa mikono?
    a) Ndiyo
    b) Hapana
22. Miongoni mwa watu wafuatao nani aliwahi kukupa ujumbe wa kunawa mikono ?
    g) Familia
    h) Viongozi wa dini
    i) Viongozi wa siasa
    j) Wataalamu wa afya
    k) Wengine (wataje)…….
23. Kati ya watu waliokupa ujumbe wa kunawa mikono, ujumbe kutoka kwa nani uliuzingatia Zaidi?
    a) Familia
    b) Viongozi wa dini
    c) Viongozi wa siasa
    d) Wataalamu wa afya
    e) Wengine (wataje)…….

24. Umewahi kupata ujumbe unaokusaidia kujikinga na ugonjwa wa UVIKO 19?
    a) Ndio
    b) Hapana
25. Katika jumbe ulizopta je kuna ujumbe ulikua unakuhimiza kunawa mikono?
    a) Ndiyo
    b) Hapana
26. Ujumbe ulikua unahusu nini?
    f) Zinakukumbusha kuwana mikono kwa maji tiririka na sabuni kila mara?
    g) Zinakuataarifu ni wakati gani unapaswa kuwana mikono?
    h) Zinakuambia faida za kunawa mikono kwa maji tiririka na sabuni kila mara?
    i) Zinakuambia madhara za kutonawa mikono mara kwa mara kwa maji tiririka na sabuni?
    j) Jumbe nyingine ……
27. Nani alikuambia ujumbe huo?……..
28. Je ujumbe ulioupata ulikusadia kubadili tabia ya kuwana mikono?
    a) Ndiyo
    b) Hapana
29. Baada ya kupata jumbe hizo, ni wakati gani unanawa mikono? (taja nyakati tano)
    vi. ……
    vii. ……
    viii. ……
    ix. ……
    x. ……
30. Je ni tabia zipi kati ya ulizotaja bado unazidumisha mpaka sasa?

    ……

    ……

    …….
31. Kama mabadiliko yapo, nini kimechangia mabadiliko hayo?
    d) Jumbe ulizopata

e) Mtoa ujumbe

f) Athari za ugonjwa

SEHEMU C

Kuaminika kwa mtoa ujumbe wa kunawa mikono katika kipindi cha COVID 19

32. Tunapata jumbe za afya kutoka kwa watu mbalimbali, ujumbe wa kunawa mikono ukitoka kwa nani utauamini zaidi? (chagua mmoja)

MTOA UJUMBE	TATHMINI	
	NDIYO	HAPANA
Wanasiasa		
Rais		
Waziri Mkuu		
Waziri wa Afya		
Mbunge		
Viongozi wa vyama pinzani		
Viongozi wa chama tawala		
Mkuu wa Mkoa		
Mkuu wa Wilaya		
Viongozi wa Kijiji au tarafa		
Wataalamu wa Afya		
Daktari		
Muuguzi		
Mganga		
Bwana/bibi Afya		
Viongozi wa dini		
Viongozi wa kitaifa		
Viongozi wa eneo la kuabudia		
Familia na marafiki		
Wazazi au walezi		
Kaka na dada		
Ndugu		
Marafiki		
Jamaaa		
Wasanii au watu maarufu		

33. Je mtoa ujumbe uliyemwamini katika kukupa taarifa za afya unaamini kuwa ni mkweli?
    a) Ndiyo
    b) Hapana
    c) Sina hakika
34. Je mtoa ujumbe uliyemwamini katika kukupa taarifa za afya unaamin kuwa ana sifa za kuaminiwa na vijana?
    a) Ndiyo
    b) Hapana
    c) Sina hakika

35. Je mtoa ujumbe uliyemwamini katika kukupa taarifa za afya unaamin kuwa ana taarifa za uhakika?
    a) Ndiyo
    d) Hapana
    e) Sina hakika

SEHEMU D

Utaalamu wa mtoa ujumbe wa kunawa mikono katika kipindi cha COVID 19

1. Tunapata jumbe za afya kutoka kwa watu mbalimbali, je nani ana utaalamu Zaidi katika kutoa ujumbe wa kunawa mikono (chagua mmoja)

MTOA UJUMBE	TATHMINI	
	NDIYO	HAPANA
Wanasiasa		
Rais		
Waziri Mkuu		
Waziri wa Afya		
Mbunge		
Viongozi wa vyama pinzani		
Viongozi wa chama tawala		
Mkuu wa Mkoa		
Mkuu wa Wilaya		
Viongozi wa Kijiji au tarafa		
Wataalamu wa Afya		
Daktari		
Muuguzi		
Mganga		
Bwana/bibi Afya		
Viongozi wa dini		
Viongozi wa kitaifa		
Viongozi wa eneo la kuabudia		
Familia na marafiki		
Wazazi au walezi		
Kaka na dada		
Ndugu		
Marafiki		
Jamaaa		
Wasanii au watu maarufu		

2. Je mtoa ujumbe aliyemchagua ana maarifa ya kutosha kutoa ujumbe wa kunawa mikono kwa vijana?
    g) Ndiyo
    h) Hapana
    i) Sina hakika
3. Je mtoa ujumbe aliyemchagua ana uzoefu wa kutosha kutoa ujumbe wa kunawa mikono kwa vijana?
    a) Ndiyo
    b) Hapana
    c) Sina hakika
4. Je mtoa ujumbe aliyemchagua ana ujuzi wa kutosha kutoa ujumbe wa kunawa mikono kwa vijana?
    a) Ndiyo
    b) Hapana
    c) Sina hakika

SEHEMU E

Mvuto wa mtoa taarifa za kunawa mikono katika kipindi cha COVID 19.

1. Tunapata jumbe za afya kutoka kwa watu mbalimbali, je nani ana mvuto zaidi katika kutoa ujumbe wa kunawa mikono (chagua mmoja)

MTOA UJUMBE	TATHMINI	
	NDIYO	HAPANA
Wanasiasa		
Rais		
Waziri Mkuu		
Waziri wa Afya		
Mbunge		
Viongozi wa vyama pinzani		
Viongozi wa chama tawala		
Mkuu wa Mkoa		
Mkuu wa Wilaya		
Viongozi wa Kijiji au tarafa		
Wataalamu wa Afya		
Daktari		
Muuguzi		
Mganga		
Bwana/bibi Afya		
Viongozi wa dini		
Viongozi wa kitaifa		
Viongozi wa eneo la kuabudia		
Familia na marafiki		
Wazazi au walezi		
Kaka na dada		
Ndugu		
Marafiki		
Jamaaa		
Wasanii au watu maarufu		

2. Je mtoa ujumbe uliyemchagua, mwonekano wake unatosha kukushawishi kunawa mikono?
    j) Ndiyo
    k) Hapana

3. Je mtoa ujumbe uliyemchagua, kuna mambo ambayo mnafanana na ndiyo yaliyokushawishi kuzingatia ujumbe wake?
    a) Ndiyo
    b) Hapana
4. Je mtoa ujumbe uliyemchagua, anapendeka kiasi cha kukushawishi kuzingatia ujumbe wake wa kunawa mikono?
    a) Ndiyo
    b) Hapana

APPENDIX II

FOMU YA RIDHAA YA KUSHIRIKI KATIKA UTAFITI

Naitwa Janeth Leonard, ni mwanafuzi wa shahadaya uzamili ya sayansi ya mawasiliano ya afya katika chou kikuu cha Afya na Sayansi Shirikishi Muhimbili. Ninafanyautafiti kuhusu athari za sifa za watoa taarifa wa jumbe za kunawa mikono kwa vijana katika kipindi cha COVID 19.

Madhumuni

Utafiti huu una lengo la kutafuta hamasa ya sifa za watoa taarifa za kunawa mikono kwa vijana katika kipindi cha COVID 10.

Ushiriki

Ushiriki katika utafiti huu ni hiyari kanisa. Endapo hutakubali kushiriki hakuna hatua zozote zitakazochukuliwa dhidi yako. Ukikubaki kushuriki katika utafiti huu, utatakiwa kujibu maswali utakayoulizwa. Utaruhusiwa kuomba maelezo kwa maswali yatakayokutatiza. Zoezi hili litachukua takribani dakika 15 mpaka 20.

Usiri

Taarifa zaote za mshiriki ni siri na zitatumika kwaajili ya utafiti huu tu. Wahisika katika utafiti huu ndiyo pekee wataruhusifa kuona taarifa utakazotoa.

Hasara

Utafiti huu hautegemeewi kuwa na madhara yoyote kwa mshiriki au mtu mwingine

Faida

Ushiriki wako katika utafiti huu utasaidia kufahamu namna ambavyo mtoa taarifa anaweza kuathiri tabia za wapokea taarifa kutokana na sifa zake. Hakuna malipo yoyote yatayoambatana na utafiti huu, ingawa tutashukuru sana ukishiriki.

Haki ya kujitoa katika utafiti

Ushiriki katikautafiti huu ni hiyari. Endapo utataka kujitoa katika utafiti huu wakati wowote utaruhusiwa. Hakuna hatua zozote zitakazochukuliwa dhidi yako

Mawasiliano

Ikiwa una swali lolote kuhusu utafiti huu, wasiliana na mtafiti mkuu, Janeth Leonard, Chuo kikuu cha Afya na Sayansi Shirikishi Muhimbili, S.L.P. 65001, Dar es Salaam. (Namba ya simu+255682488952).

Ridhaa ya kushiriki

Umekubali kushiriki? NDIYO…….NO……

Kama umekubali kushiriki tafadhari saini hapa chini

Saini ya mshiriki……Tarehe…….

Saini ya mtafiti……....Tarehe……

CONSENT FORM

ID No. HD/MUH/T.709/2019

Consent form to collect information on the influence of credibility of sources of COVID 19 Messages on Handwashing Behaviour among Youth in Kinondoni District.

Introduction

My name is Janeth Leonard, a student at Muhimbili University of Health and Allied Sciences, pursuing a master degree of science in behaviour change communication for health. I am doing a study on the influence of credibility of sources of COVID 19 Messages on Handwashing Behaviour among Youth in Kinondoni District. I have passed through local government leaders and they have permitted me to conduct this study.

Purpose of the study

The purpose of this study is to collect information on the influence of credibility of sources of COVID 19 Messages on Handwashing Behaviour among Youth in Kinondoni District.

Participation

If you agree to participate in this study you will be required to answer questions that will be asked by the interviewer. You will be allowed to ask for clarification for questions which you will not understand

Confidentiality

All information in this study will be treated confidentially. Only people who involved in administering this study will be allowed to access the collected information. In no circumstance will you be identified as respondent to this study.

Risk

This study anticipates no harm to anyone who will participate or people around them.

Benefit

Your participation in this study will contribute to understanding appropriate communication strategies for youth population. No financial benefits will be attached to this study

Right to refuse or withdraw from the study

Participation in this study is completely voluntary. You are allowed to refuse or withdraw from the study whenever you wish. You may also wish to not to respond to some questions that you do not feel comfortable answering them. No measures will be taken against you.

Who to Contact

In you have any question about this study, please contact the principle investigator; Janeth Leonard, Muhimbili University of Health and Allied Sciences, P.O.Box 65001, Dar es Salaam. Mobile No. +255682488952

Agreement Part

Do you agree to participate? YES……NO……..

If you agree, please sign below

Signature of participant……..Date……

Signature of the researcher……..Date……