

RESEARCH REPORTS

Pattern of health awareness by a health care provider in Maldives: A descriptive study

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ABSTRACT *Health awareness is considered to be one of the most essential ingredients of life. In Maldives, Mass media has been utilized to create health awareness among the people. Formally in Maldives, radio represents a popular form of communication and was the most extensively utilized form of mass media used to create health awareness among public. However, with advancement in technologies other forms of media social media platforms have been started using to create health awareness in the recent few years. The main objective of the study was to identify the pattern of health awareness created by selected health care provider (HCP), a single medical doctor who has been creating health awareness during the past 14 years period starting from 2010 till end of 2023. A retrospective descriptive cross-sectional study conducted using pre-collected data, by preparing a check list through note sheets of selected health care provider (HCP). The population for the current study is tasks or events performed by selected HCP with intention to create health awareness. Henceforth, total 359 events or tasks were included in this study as study subjects which were performed by the selected HCP in the past 14 years period starting from 2010 till end of 2023, which is also considered as sample size of the study. Majority of the awareness activity occurred in the year 2020, while majority occur specifically in the month of March. Radio was major source of awareness created, Voice Of Maldives (VOM) was main station where most of the awareness events took place and radio discussion was main method of awareness used by the selected HCP. Major topics covered in health awareness include tobacco, non-communicable disease, communicable disease, nutrition, Ramadan and health. Radio was major source of health awareness created by selected health care provider.*

Keywords: Health Awareness, Public Awareness, Health Information, Radio, TV, Voice of Maldives, Television Maldives, Health Care Provider.

Introduction

Health awareness is considered to be one of the most essential ingredients of life. People do not value their good state of health until they experience one form of sickness or another. In health awareness, information dissemination is a key mechanism of creating awareness, a crucial factor in the detection and prevention of diseases. Health awareness is created through various medium and methods.

An integral part of health service is health education (Shojaeifar, 2017). Health education has an extensive role in growing healthy behaviors by raising knowledge about public health and promoting health related activities (Shojaeifar, 2017).

Health education plays a huge and crucial role in primary health care, where the major health burden includes non-communicable disease, communicable disease, and mental health and also where risk factors contributing to non-communicable

disease like tobacco use, unhealthy diet and sedentariness are predominant (Shojaeifar, 2017). Many health concerns among the public can be prevented by creating awareness on the concerned areas. And such health awareness can be created by utilizing various medium of mass medias such as radio, tv, newspapers, etc (Shojaeifar, 2017).

Media is crucial to achieve health outcomes such as public education, changing attitude and behaviour (Ahmad & Murad, 2020). In addition to creating awareness on risks to public health, media also can be critical to mobilize public response in situation like public health crisis such as a community outbreak or pandemic (Adebisi et al., 2021).

Television programs, magazines, internet websites, feature-length films, music tapes, radio programs, newspaper, a tool or technology that is utilized by someone to convey a message to a huge external audience is called mass media (Parmar, 2020). Mass media offer best opportunity to reach larger population within short time frame (Matamoros, 2011). Mass media can increase awareness quickly and effectively (Matamoros, 2011). In health promotion strategies, mass media including radio have become a critical globally (Thomas et al., 2018). The mass media, specifically radio and television as one of the major pillars of education (Liu et al., 2019) and information in the community and can take a respectable role in public health promotion (Mazumder, 2019).

Radio can broadcast health messages, thereby playing a role in health promotion and community wellbeing (Ewart, 2011). Previous studies also showed that engaging radio support individual wellbeing (Krause, 2020). In the time of health crisis, radio has the power to build resilience among people (Ephraim, 2021). Radio was also used to inform behaviour change and provide platform to discuss about pandemic (United Nations, 2020).

Television is used to create health awareness among general public (Chioma, 2014). The most powerful mass medium invented by man is television (Chioma, 2014). Television provides its audience the opportunity to watch and listen to its messages (Chioma, 2014).

People of lower social status and lower education indicate that television is their main source of health information (Primack et al., 2010). What is more, television constitutes an effective source of health information for foreigners (Clayman et al., 2010). Women who base their knowledge of health on television decide to undergo mammography more often than those who obtain their information through the radio or the Internet (Redmond et al., 2010)

Newspapers have been identified as a channel of disseminating health information on various health risks, disease outbreaks, and other prevalent health issues to members of the public (Torwel & Rodney, 2010). Newspapers appear to be the best choice to obtain health information as newspapers are seen to be highly reliable sources of information (Dutta-Bergman, 2004).

All medium of mass communication circulate health information, yet newspapers allow the people to read the health piece multiple times. Moreover, the comprehensive analysis while writing newspaper make it as an acceptable source of health information (Clark & Illman, 2006). General public get lot of health information from printed media (Mollyann Brodie, Nina Kjellson, Tin, 1999).

Mass media usage in Maldives

Maldives Demographic and Health Survey (2016-2017) revealed that 86% of women and 78% of men watch television at least once a week in Maldives. The percentage of people who read newspapers are 52% and 54% respectively for women and men. Furthermore 36% of women and 23% of men listen to radio at least once a week (MOH, 2018). In addition, 80% of women and 89% of men have ever used internet, and more than one fifth says they use it almost every day (MOH, 2018).

Health awareness in Maldives

In Maldives, Mass media has been utilized to create health awareness among the people (Husna & Waheed, 1985). However, it is not utilized to its full potential capacity due to multiple constraints in Maldives (Husna & Waheed, 1985).

Formally in Maldives, radio represents a popular form of communication (Husna & Waheed, 1985). It was the most extensively utilized form of mass media used to create health awareness among public in Maldives (Husna & Waheed, 1985). However, with advancement in technologies other forms of media such as TV, online newspapers, various applications such as TikTok, YouTube channels, Facebook, twitter and other social media platforms have been started using to create health awareness in the recent few years.

Previously, regularly weekly programs on various health topics were broadcasted on radio (Husna & Waheed 1985). TV is also used to limited extent to create health awareness (Husna & Waheed, 1985). The other two forms of mass media in the Maldives are newspapers and cinema. However, these sources are restricted to only certain section of population previously, thus by then, have not been used to create health awareness (Husna & Waheed, 1985).

Maldives' constitution guarantees the "Right to Healthcare", and having access to appropriate and up to date information on health conditions and how people can protect and manage their health are key components of "Right to Health". Empowering people with health awareness and health information, is a statutory mandate of the Health Protection Agency (HPA), the public health arm of the Ministry of Health, and responsible for promotive and preventive health.

In Maldives, health awareness activities occur in various forms which include media programs like Radio or TV programs, media articles published in local newspapers, posters and short videos in social media platforms, awareness sessions in the form of presentations, speech or assembly talks, media campaigns, etc.

The HPA, as the premier public health institution of the country, and in carrying out its health promotion and awareness mandate, employs multi-pronged approaches and methods. HPA has institutionalized public health programs and initiatives dedicated for specific diseases, behavioural or environmental risk factors. These programs develop and disseminate awareness materials as well as technical guidelines targeted for public and professional use, including training and educational purposes (H.Mohamed, Personal Communication, April 10, 2024).

The Health Promotion section of HPA, has the primary responsibility for creating public awareness, through marking of public health days, events, collaborating with other sectors, including civil society to ensure wider dissemination of health information. The primary health care centers at rural settings as well as urban

primary health centres in cities, and public health units at hospitals closely coordinate with HPA for providing the right information to general public and patients. Awareness is created mainly through mass media, social media, as well as through physical awareness sessions; for public, government offices, for students and opportunistically to provide tailored and disease specific information to patients and families during consultations (H.Mohamed, Personal Communication, April 10, 2024).

In addition to regular health awareness activities promoting healthy lifestyles, HPA is particularly active during disease outbreaks, pandemics and other health emergencies, or any event including natural disasters, fires, extreme weather, water and sanitary disruptions that may have public health consequences. In these situations, HPA assumes the role of “one-stop” information source for both public and health care professionals and entities (H.Mohamed, Personal Communication, April 10, 2024).

Although the public funding for preventive health has traditionally being very low (less than 1 % of health sector budget), in recent years, with renewed emphasis on preventive health, as well as with the endowment from Public Health Fund, there has been an increase in resource allocation trend for health promotion and awareness activities (H.Mohamed, Personal Communication, April 10, 2024).

In Maldives, non-government organizations (NGOs) also involve in creating public health awareness. Non- government organizations (NGOs) such as Society for Health Education (SHE), Cancer Society of Maldives (CSM), Diabetic Society of Maldives (DSM) and some other NGOs who perform the health awareness activities based on their interest and preference. Such health awareness activities are mainly done by the members of corresponding NGOs and the contributor could be a doctor, nurse, community health officer, paramedic or any other health care professionals who has enough expertise in their field or area. These NGOs conduct awareness through the scheduled trips to various Atolls and Islands across nation in the form of power point presentations, focus group discussions with small selected groups and even one to one individual talks in some sensitive topics.

In periphery, Regional Hospitals, Atoll Hospitals and Health Centres involve to create health awareness in their corresponding communities to celebrate certain health related days such as world health day, world diabetic day, world heart day, etc. In some instance such events are organized and conducted with collaboration from HPA and some NGOs. And in such circumstances, public health or primary health care workers, doctors, nurses and other paramedics involve in creating such health awareness.

Healthcare providers and health professionals play a key role in creating awareness to the public, both due to their strategic settings and regular interactions with patients and family members. Health care professionals collaborate closely with HPA in updating their information, and in turn, they act as the main resource persons in awareness activities (H.Mohamed, Personal Communication, April 10, 2024).

However, their involvement in creating awareness among public at individual level is limited. Earlier, the late Dr Ahmed Razy had contributed in various health awareness programs on aired by various channels. However, it is lacking in the recent few years, only few doctors are involved truly in creating awareness and contribute physically in conducting awareness. The lack of doctor’s involvement

in creating awareness especially through media programs could be due to time constraints, hesitancy to communicate fluently in local language, audience fear, etc.

Health awareness programs through different broadcasting media is mostly opportunistic and temporary. In the past decades, some health-related programs have been on aired on seasonal basis with 12 or 13 episodes considered as a season which continue usually for 3 months of duration. Continuous media programs solely targeted to health awareness is scarce. At present few programmes include specific segment which talks about health topic of concern of moment or period during which programme is on aired such as Hendhunu Hendhuna Program by public service media television channel, Television Maldives (TVM) and Rakkaave Thibiyya Dhathureh by public service media's radio channel, Voice of Maldives (VOM). One regular radio program which has been on air majorly as live program in the past 10 years is Dhulhaheyo by VOM which usually on air live by Every Friday night 9:00pm. There may be other such programs on air through different medias.

Prevalent health issues in Maldives

Non communicable disease (NDCs)

In Maldives, Non - Communicable Disease (NCD) are responsible for major mortalities. According WHO (2018) non communicable disease are estimated to account for 84% of all deaths in Maldives. This consists of 36% for cardiovascular disease, 17% for cancers, 9% for chronic lung disease, 3% for diabetes, and 19% for other NCDs. The remaining 16%, out of which 8% is accounted for communicable, maternal, perinatal and nutritional conditions and other 8% accounted for injuries (WHO, 2018).

STEP survey (2020-21) discovered that 4.7% reported having had a heart attack, angina, or stroke (Raheem & Moosa, 2022). However, Maldives Demographic and Health Survey (MOH, 2018), showed that only 1% or less of women and men aged 15-49 years have ever had a heart attack, stroke, renal failure or cancer. Furthermore, the STEP survey also showed that 13.6% of the population at CVD risk of $\geq 20\%$ over 10 years (Raheem & Moosa, 2021), thus it is estimated that 61.8% require drug therapy and counselling to prevent heart attacks and strokes (Raheem & Moosa, 2022).

STEP survey (2020-21) revealed that 44.5% people were told to have raised blood pressure, and 87.7% are taking medication for hypertension. Regarding diabetes, 13.2% were reported to have raised blood sugar, 97% taking medication for diabetes while 64% taking insulin for diabetes (Raheem & Moosa, 2022). Regarding hyperlipidaemia, 33.4% were reported to have raised blood cholesterol and 93.7% of people who were diagnosed to have raised blood cholesterol taking medicine (Raheem & Moosa, 2022). STEP Survey (2020-21) showed that more than half (52%) of the population is overweight and more than 18% of the population is obese (Raheem & Moosa, 2022). Maldives Demographic and Health Survey (2016-17) reported that almost half (49%) of women in Maldives are overweight or obese (MOH, 2018).

NCD risk factors

STEP Survey (2020-21) findings show that 23.1% are current smokers out of which 35.6% are males and 7.6% are females. It also showed that 26% of the people smoke and 22% are daily smokers. Out of the current smokers, 87.1% are daily smokers and the most used type is manufactured cigarettes (Raheem & Moosa, 2022). According to STEP survey 2011, 34.7% of men and 3.4% of women used tobacco in Maldives (WHO, 2011). About 5% of the population also uses smokeless tobacco (Raheem & Moosa, 2022). One third (33%) of the population is exposed to second hand smoke (SHS) at home and 10% exposed to SHS at workplace (Raheem & Moosa, 2022). The STEP survey 2011 found that 21.3% reported being daily exposed to second hand smoke at home, while 17.1% reported second hand tobacco exposure at workplace (WHO, 2011).

The STEP Survey (2020-21) results showed that only 23.6% of the respondents engage in vigorous physical activity and 65.1% engage in moderate physical activity. Seventy percent of the people do not walk or use bicycles to travel. This indicates that 45.8% of the people do not meet the recommended level of physical activity (Raheem & Moosa, 2022).

More than half (56.2%) of the Maldivian population are daily areca nut chewers. It has to be noted that some people use tobacco while chewing areca nuts (Raheem & Moosa, 2022). Only 4.7% of the population agreed that they consume alcohol, and those who agreed to consume alcohol are mostly (50%) in the age group 15-29 years (Raheem & Moosa, 2022).

Mental health and Injuries

When looking into mental health, about signs of depression, 17.7% reported feeling down and 17.1% reported difficulty in sleeping and 7.45% reported the feeling that it is better to be dead. When asked about self-harm, 4.3% considered self-harm (Raheem & Moosa, 2022). STEP Survey (2020-21) also showed that 21.4% of people reported to have had a road traffic injury and 58.6% reported the type of accident was fall followed by cuts (Raheem & Moosa, 2022).

Communicable disease

Maldives Demographic and Health Survey (MOH, 2018) reported that 4% of children under age of 5 years had a diarrheal episode in the 2 weeks before the survey (MOH, 2018). In 2020, diarrheal disease and dengue are considered as top leading causes of admission for infants and children age 0-14 years (MOH, 2020).

In Maldives less than 1% of children under age 5 years were reported to have symptoms of Acute Respiratory Infection in the 2 weeks preceding the survey and 25% of children were reported to have had a fever in the 2 weeks before the survey (MOH, 2018). The percentage of children with fever who were taken advice or treatment is 86% according to Maldives Demographic and Health Survey 2016-17 (MOH, 2018).

According to surveillance reports of 2020 most commonly notified 4 diseases are Acute respiratory infections (96,659), viral fever (30,806), Acute gastroenteritis (14,892), and conjunctivitis (8,988). Furthermore, 818 cases of chickenpox, 328 cases of dengue fever, 243 cases of measles and 163 cases of hand foot and mouth

disease were reported in 2020 (MOH, 2020).

Nutrition and diet

According to STEP Survey (2020-21) fruit and vegetable consumption of Maldivian is low. More than 50% consume less or equal to one serving of fruit per day and more than 80% consume less or equal to one serving of vegetable per day. Furthermore, Maldivians consume fruits and vegetables on average four days per week, thus indicating Maldivian population does not meet the WHO recommendation of five servings of fruits and vegetables per day (Raheem & Moosa,2022). Daily salt intake is much higher than the recommended 2.3g/ day with a mean of 8.8g/day. More than 50% of the population add sauces to the food before or during eating (Raheem & Moosa,2022).

Maldives demographic and health survey (2016-17) showed that 63% of women aged 15-59 are anaemic, out of which majority (49%) are mildly anaemic, 13 % are moderately anaemic and less than 1% are severely anaemic. (MOH, 2018).

Aim of the research

The main purpose of the study was to identify the pattern of health awareness created by selected Health Care Provider (HCP), including assessing frequency of topics or contents, methods, sources, stations or places and programs through which and how mostly health awareness were created. Furthermore, percentages of streaming status of health awareness events, years of health awareness and months in which awareness were occurred have been assessed in this study.

Justification for the study (significance)

The particular health care provider who is a single medical doctor who has been creating health awareness during the past 14 years period starting from 2010 till present. However, the research included health awareness activities conducted by selected from 2010 to end of 2023. During which 2013 and 2014 were excluded as in those 2 years the selected HCP was not in government service thus, no opportunities were facilitated to create health awareness. Although the selected health care provider joined the medical practice in late 2008, the time frame of 14 years was selected as the selected health care professional started his contribution in health awareness almost 14 years back in 2010 in the form of awareness session for school children in the island where the selected doctor was practicing at the early days. However, for the given reason 2 years were excluded as mentioned earlier.

The particular doctor was selected for his wide contribution in health awareness in the past decade. Maldives Medical Association has awarded to the selected doctor “Public Awareness and Health Promotion Award” in 2023 in appreciation to the commitment to public awareness and health promotion (MMA, 2023). The selected medical doctor is a public health specialist by profession and a senior medical officer by designation currently working in an urban primary health care center in Greater Male’ Area (GMA). The selected HCP also has taken part in 13 different global or regional conference to represent Maldives and has facilitated multiple local trainings, mostly related to tobacco control and non-communicable

disease (NCD). Furthermore, the selected HCP has given consultancy to few health-related media programs.

To the researcher's knowledge medical doctors whom involve in public health awareness is limited and lacking and the research on health awareness in Maldives is scarce, thus the forementioned selected health care provider's contribution in health awareness was selected to be studied in this research with consideration to given objectives.

The study is about a health awareness activities conducted or performed by individual medical doctor; thus, this study may motivate other medical professional to engage in health awareness activities in the future. As the studies in this area is scarce in Maldives, it may also be beneficial for future researchers who conduct research in this area as this could be considered as a baseline study and may be referenced in future researches.

Literature review

Health education is an essential and integral part of health services (Shojaeifar, 2017). Health education has an extensive role in growing healthy behaviors by raising knowledge about public health and promoting health related activities (Shojaeifar, 2017). Health education plays a huge and crucial role in primary health care, where the major health burden includes non-communicable disease, communicable disease, and mental health and also where risk factors contributing to non-communicable disease like tobacco use, unhealthy diet and sedentariness are predominant (Shojaeifar,2017). Many health concerns among the public can be prevented by creating awareness on the concerned areas. And such health awareness can be created by utilizing various medium of mass medias such as radio, tv, newspapers, etc (Shojaeifar, 2017).

Health awareness is defined as the process of teaching individuals' healthy habits, new healthy behaviours, and helping them rebuild healthy behaviours through various social and communication institutions (Ali & Bhatti, 2020). Health awareness by mass media is created using various medium and methods. Nabi & Oliver (2009) reported media as great power influencing individual and public health.

Role of mass media in health promotion and health awareness

Mass media means a technology that is planned to reach a mass audience. It is primary means of communication utilized to connect the immense majority of the general public (Parmar, 2020). It is referring to a various method of data and information on a global scale and it plays a crucial role in society life (Mujtaba, 2011). it is also refers to use of any mechanical device that multiplies and disseminates messages to huge amount of people simultaneously (Ndimele & Innocent, 2006).

There are two major types of mass media which are print and broadcasting media. The print media consist of newspapers, magazines, books, handbills, leaflets, etc, while the broadcast/electronic media consist of the radio, television, films, etc (Ndimele & Innocent., 2006). The general platforms for mass media are newspapers, magazines, radio, television, and the internet (Parmar, 2020).

Mass media health campaign have been used as a tool for public health promotion (Noar.,2006). It is been extensively utilized to provide messages to vast majority of

people through existing media, such as television, radio, newspapers (Noar., 2006). The highest priority in public health campaign is changing behavior, however, knowledge and awareness will be changed more easily than behavior in most of the mass media campaign (Matamoros., 2011). Multi-channel campaigns appear to be more effective and successful than single channel campaign (Matamoros., 2011).

Social media, TV, radio, public service advertisements, spots as well as the engagement of role models are suitable methods to raise awareness on young people's health and potential risks and available health services among young people as well as the larger community (MOH, 2016). Access to accurate and reliable health information is a cornerstone for improved and sustainable health outcomes (Godlee, et al., 2004).

Role of broadcasting media (Radio & Television) in health promotion and health awareness

Radio considered as one of medium of mass communication. Radio could be an effective health information source (Olaoye and Onyenankeya, 2023a). It is one medium that can be utilized to communicate health related message. It penetrates the lives of people from all walks of life society (Ndimele & Innocent., 2006).

Health professionals have recognized the benefits of using radio to broadcast health messages and have subsequently utilized radio to educate listeners about heart disease (Marx et al., 2009), smoking behavior/tobacco cessation (Durkin & Wakefield, 2009), as well as healthy eating and physical activity (Beaudoin, Fernandez, Wall, & Farley, 2007). Learning from radio can serve as a primary form of health information gathering (Dutta-Bergman, 2004, p. 279). Health education radio show successfully increases knowledge levels and individuals' intentions to positively modify health behaviors (Smith et al, 2011).

In Bangladesh, less than half (48%) listen health and nutrition programs through community radio (Mamnun-ur, 2019). A study conducted in South Africa showed that 57.5% of study participants mentioned radio as main source of health information, followed by 20 % and 17% respectively for television and social media (Olaoye and Onyenankeya, 2023b).

Health programs are broadcasted daily in all discipline on radio in Pakistan (Saleem et al., 2021a). Best resource persons are called for all the daily health programs by radio programmers or producers based on their discipline, requirement of audience and content of the program (Saleem et al., 2021a). Radio listeners get opportunities to ask the question to doctor or resource person and can get the answers to their queries through live programs in radio directly (Saleem et al., 2021b). Live radio programs are very informative and helpful to create awareness among the audience (Saleem et al., 2021b).

A Nigerian study showed that majority of radio stations in Nigerian city of Port Harcourt, local government area broadcast health related programs weekly (Konye, 2021). The same study reported radio as source of health information in Port Harcourt district, Nigeria (Konye, 2021). Many of the radio stations produced their health-related programmes (Konye, 2021). Another study conducted in River state, Nigeria, demonstrated that majority (54%) believe radio programs give greater attention to other health related issues than the matter of

menopause (Innocent, 2023). In addition, a Zambian study revealed that radio was a significant and trusted source of health information (87%) which influence the health behavior of people (Lawrence, 2012).

A Study conducted in Nigerian Owerri Municipal demonstrated that majority (94%) of residents are exposed to health programs on covid 19 pandemic outbreak via radio on large extent (Julian et al., 2021). Furthermore, majority (95%) also accepted the fact that exposure to radio programmes play a role in creating awareness of the Covid-19 pandemic outbreak (Julian et al., 2021).

Television is also one of the methods of mass media. Television health messages can be in form of soap operas or drama series, jingles, campaigns, talk shows and magazine format (Atakiti&Ojomo, 2015). Television news programs are the most common source of health information for Americans (Cooper, 2000). Luth et al (2013) reported television as a valuable medium for communicating health information and should become a partner to all the institutions related to health.

A study conducted in Nigeria on Nigerian Television Authority (NTA) awareness campaign on Covid 19 discovered that NTA created awareness on covid 19 through the TV programs (Effiong et al., 2020). Ngonso & Chukwu (2020) assessed the impact of Covid-19 pandemic broadcast media messages on rural community behaviour change, which demonstrated that many members of the community are exposed to COVID-19 media messages via television. The findings also revealed that members of the community, particularly the educated, watch television (Ngonso & Chukwu, 2020).

A study conducted in USA showed that most common sources to obtain health information are Internet (68.7%), family members (65.7%), healthcare professionals (61.6%), and educational settings (61.6%), friends (46.5%), Television (42.4%), Newspaper or magazines (41.4%) and 27.3% for radio (Smith et al, 2011). Furthermore, a study conducted in Himachal Pradesh, India, have reported that majority of people in Himachal Pradesh use media, including television, radio, social media platforms, and online news sources, which have played an important role in health information provision to individuals during the pandemic (Shree & Chauhan, 2023).

In Algeria, television seeks to educate Algerian families to raise awareness and practice health in light of the Covid 19 pandemic (Bessous & Bouras, 2022). TV use all persuasive appeals and adopts all kinds of content to raise health awareness and healthy practice among Algerian families in regard to Covid 19 (Bessous & Bouras, 2022).

Iran have Islamic Republic of Iran Broadcasting Health Channels (IRIB HC) called “Salamat Tv”, which on average people watch 2.6 hours per and 75% people were satisfied with programs on aired by IRIB HC (Saei et al., 2021).

A Nigerian study have reported that majority (58%) of study participants listen to radio and 35% watch television (Chidinma, 2019). However, In Malawi, 79% of women listen to radio, while 11 % watch television (Meekers et al, 2007). The findings are in accordance with some previous studies done in Tanzania as the results of one selected study showed that most frequently used media in Tanzania is radio followed by TV and newspaper with percentages of 34%, 29%, and 17% respectively (Nilsson, 2014). Nilsson (2014) also reported that radio is more used in low-income areas while television and newspapers are more frequent in the high-income areas (Nilsson, 2014). An evaluation showed that radio had the

most reach in the Republic of Ireland, which is more rural than the rest of the country (AAIHP, 2014). A study conducted in Kolkata reported that 69% of study participants use radio, while 74% of them have access to television at home (Ganguly & Kanjilal, 2017).

Stilwell et al (2001) report that radio can be a very effective means of communication and spreading of information as it can be broadcast widely to a large community in a cost-effective manner. Literature also shows that in addition to radio, television and newspapers are main sources of information for people in developing countries (Johnson, 2007). A study on Mongolian information seeking behavior discovered that television and newspapers were the first two choices of information sources for the respondents (Johnson, 2007). Additionally, Stilwell et al (2001) outline that in many African countries, radio is still among the most accessible, most used, and most economical information disseminator.

Role of Printing media (newspapers) in raising health awareness

Newspapers enjoy a wide readership throughout the world and contribute to health education of people by publishing articles on diverse issues such as hygiene, immunization, sanitation, population control, environmental pollution control, communicable disease control, deficiency disease control, accident control, reproductive health, maternal health, child health, adolescent health, geriatric health, industrial health, mental health, and healthy life style (Dhaar & Robbani, 2008).

All medium of mass communication circulate health information, yet newspapers allow the people to read the health piece multiple times. Moreover, the comprehensive analysis while writing newspaper make it as an acceptable source of health information (Clark & Illman, 2006). General public get lot of health information from printed media (Mollyann Brodie, Nina Kjellson, Tin, 1999).

A positive change had brought by newspapers through raising public awareness on various health issues primarily on substance abuse, tobacco and various preventive measures of many diseases (McGee et al., 2014). Readers make crucial health decision with regard to information obtained through newspapers (Criss et al., 2015).

Moyer (1995) reported that health information dissemination via print media is crucial to shape public belief and behaviour. However, evidence shows that quality of health information provided by newspapers is weak (Criss et al., 2015). Furthermore, newspapers have low preference as source of health information (Olaoye and Onyenankeya, 2023b).

A retrospective study conducted using 3 newspaper's data from 2003 to 2005 showed that major health condition or diseases covered in the selected newspapers were HIV/AIDs, cardiovascular disease such as stroke, malaria, tuberculosis and eye infections (Diedong, 2013). Ghanaian newspapers create awareness on health matters through the publication of straight news stories (Diedong, 2013).

Jamshed et al (2017) discovered that patients obtain health benefits through the use of electronic media. More than half (53.93%) did not consider that electronic media can encourage patients to modify their lifestyle for the betterment of health (Jamshed et al., 2017). More than one third of patients primarily get information about their disease condition from the Internet (Jamshed et al., 2017).

A study conducted in Manipur, India, expressed that number of publications of health-related articles within the duration of one year was 10,874 and more than half of the health articles were published in English newspapers (Paul & Singh, 2016). The same study discovered that maximum published articles were public health-related (72%), injury-related (95%) and other health-related (83%) and are published in news items, while health topics (45%) were published mainly in health section of newspapers. Furthermore, it also identified that public health (59.0%) and medical topics (87.0%) were published more in English newspapers compared to the Manipuri newspapers (Paul & Singh, 2016). The study reported that Manipuri newspapers, medical topics were usually published more in the column section (Paul & Singh, 2016). Moreover, English newspapers usually have a separate health section in the last part of the newspaper where they usually publish the medical topics, but it was not so for the Manipuri newspapers (Paul & Singh, 2016). Similarly, for public health articles, both types of newspaper gave equal importance regarding the page of publication (Paul & Singh, 2016).

Paul & Singh (2016) reported that Manipuri newspapers gave more importance to the injury-related articles due to frequency of local occurrence than public health related articles. Additionally, a study conducted by Westwood et al. in Australia had shown that public health articles were less represented in the prominent pages compared to the medical topics

A study was conducted by Maheswar et al (2012) including 6 leading newspapers (3 English and 3 Telugu) found that nutrition-related articles were published more in health section and women's page in Telugu newspaper, but in English newspaper, it was found more in the column section. Research conducted in India including two national newspapers (English and Hindi) found that Hindi newspaper published a greater number of health articles compared to English newspaper (Gupta & Sinha, 2010).

Preferred health topics

A Tanzanian study reported that people like to know more about cancer, HIV/AIDS, Malaria, Hygiene, family planning, Hepatitis A, dengue fever and typhoid fever. However, as in Tanzania Malaria and HIV/AIDS are biggest health hazards in the country, health information on these 2 conditions is higher in Tanzanian media (Nillson, 2014). The most common advice given in the US medical talk TV show "The Dr Oz" was concerned diet (Korowynk et al., 2014).

Cancer was the main topic in health stories in black newspapers than in general audience newspapers in Canada (Cohen et al., 2008). Furthermore, the same study reported breast cancer as most frequently reported in both black and general newspaper (Cohen et al., 2008). In America, a great amount of awareness and information on STDs were published in newspapers (Davidson & Wallack, 2004). In the same way, newspapers in the United States disseminate information about type-2 diabetes, and indicates further that behavioural factors and obesity dominate the explanation of type-2 diabetes in newspapers (Gollust & Lantz, 2009). Other health issues which health communication studies have examined in relation to newspaper reportage include HIV/AIDS, malaria, polio, family planning, abortion,

drug and tobacco intakes and hypertension (Wakefield et al., 2010).

Health Information Source

Most preferred source of obtaining health information was health care professionals followed by the Internet, family members, and educational avenues (Smith et al, 2011). Physician's source is the most important source of the preferred health message that is highly related to the rising of public health awareness against Covid 19 pandemic in Jordan (Al-Dmour et al., 2022).

Younger people prefer to receive health information through the internet or other electronic means, while older people prefer the newspapers (Colby et al., 2011). People have more trustworthiness on health information provided by doctors or other health care professionals (Berry et al., 2009).

People of lower social status and lower education indicate that television is their main source of health information (Primack,2010). Television constitutes an effective source of health information for foreigners (clayman,2010). Women who base their knowledge of health on television decide to undergo mammography more often than those who obtain their information through the radio or the Internet (Redmond, 2010).

A study conducted in Dar E Salam, Tanzania discovered that 36% of study population use radio, 29% use television and 17% use newspaper to obtain health information (Nillson,2014). In Tanzania the most trustworthy media is television followed by radio (Nillson,2014). Television and radio dominate as preferable sources of health information In Tanzania (Nillson,2014).

In Ilorin state of Nigeria, 41% of women receive maternal health messages by health programs on broadcasting media (Chidinma, 2019). Majority of women consider broadcasting media as main source of maternal health information (Chidinma, 2019).

A study conducted in South Africa reported medical doctors, health practitioners, and experts featured on the radio as credible sources of health information (Olaoye and Onyenankeya, 2023a).

An Indian study reported that 44 % get information on health awareness from television, 5% from daily newspaper, 73% from radio, 12% from health workers and 25% from local doctors (Ganguly & Kanjilal, 2017). The study concluded that majority of information on health issues were obtained from the media (Ganguly & Kanjilal, 2017).

Source of information in Maldives

Multiple sources such as radio, TV, social media, printing medias like newspapers, pamphlets, leaflets, books, documentaries, awareness session using ppt presentation, assembly talks or speeches at functions etc were used to create health awareness in Maldives.

The main sources of information for the Maldivians are radio and television, and newspapers to some extent (Riyaz,2009). Television appears to be the main source of information in Maldives with 36 (70.6%) of the rural and 35 (72.9%) of the urban respondents identifying it as the source that met their information needs. This is followed by radio for the rural community with 29 (56.9%) respondents, and the Internet for the urban community with 29 (60.4%) of the respondents

stating thus (Riyaz, 2009).

In Maldives, Newspaper reading, in both print and online versions, was more common in the urban community. Twenty-six (54.2%) urban respondents read newspapers “regularly”, while only 14 (27.5%) rural respondents were “regular” newspaper readers. Thirteen (27.1%) respondents from the urban community stated they read the newspaper online, while only 5 (9.8%) rural respondents did this (Riyaz,2009). The role of newspapers as an information source or method is slightly higher in the urban community with 21 (41.2%) rural respondents versus 26 (54.2%) urban respondents stating newspapers met their information needs (Riyaz, 2009).

In Maldives, doctor/health worker is seen as the main source of information on health issues. A study finding by Riyaz (2009) showed that 96.1% of rural respondents and 64.6% of the urban respondents receive information on health issues from doctors/health workers.

In the rural community the second most used health information source was television with a 78.4% (23 “most often”, 14 “often”, and 3 “rarely”) of the respondents identifying with this the third most reliable source for health information for the rural community appears to be the radio with 64.7% (made up of 15 “most often”, 15 “often”, and 3 “rarely”) of the respondents, followed by family/friends with 60.8% (9 “most often”, 18 “often”, and 4 “rarely”). In the urban community there is not much difference between the levels of reliance on doctor/health worker (64.6%) over television (60.4%), Internet (56.3%), and newspapers (52.1%) as a health information source (Riyaz, 2009)

Methodology

A retrospective descriptive cross-sectional study conducted using pre-collected data by the selected individual medical doctor or HCP. The study is descriptive in nature as the study used the description of selected variables of the study through observation and review of note sheets prepared by the selected HCP.

The population for the current study is tasks or events performed by selected HCP with intention to create health awareness. Henceforth, total 359 events or tasks were included in this study as study subjects which were performed by the selected HCP in the past 14 years period starting from 2010 till end of 2023. The sampling technique used for the study is census sampling method, thus all the study subjects that met the study criteria were included in sample size, making the sample size of the study as equal to the total population which is 359.

The data was collected by primary researcher using an observation chart or checklist prepared after reviewing note sheets of researcher several times. It was filled by the researcher based on note sheets (including list of media appearances, list of health awareness sessions, list of articles written and published on the name of selected HCP) made and maintain by the selected the HCP.

The observational chart or check list consists of 10 categorical variables which were filled using the note sheets made and maintain by the selected the HCP since the beginning of health awareness work back in 2010. The 10 variables described in the study are 1. year of awareness, 2. month of awareness occurred, 3. sources of awareness, 4. station through which the awareness was conducted, 5. method or form of awareness, 6. topic of awareness, 7. streaming status of awareness

activity, 8. programs during which awareness were performed, and its relation to 9. Ramadan & health, 10. Hajj, Umrah & health.

The data was analysed using statistical package for social science (SPSS) version 21.0. It was checked for its completeness, missed values, unlikely responses, accuracy, clarity and validity. Descriptive statistics were performed for each variable or items using mean, median, mode, frequency, percentages and presented using charts, graphs and tables.

A pilot study was conducted using few events which fit the study criteria, to increase the validity and reliability of the questionnaire and Cronbach's Alpha score of 0.626 obtained on reliability test indicating the questionnaire is reliable to be used to measure the concerned study objectives. Those events involved in the pilot study was not excluded from the original study as this study contain no human subjects as source of data as well the census sampling was used as a sampling technique.

Limitation

The data collected represents only the health awareness works performed by selected HCP or a single medical doctor, thus the findings is not generalized to all the HCPs working in Maldives. The data was collected using observational chart or check list which was prepared based on the note sheets made by selected HCP, thus there could be possibility of recall bias while entering the data into note sheets of selected HCP as note sheets were made and maintain since the initiation of health awareness by selected HCP. However, data accuracy was verified by the researcher to minimize the cross- referencing of data through repetitive checking after the initial data entry. The study was delimited to the events or task conducted with intention of creating health awareness by selected individual HCP, thus the analysed data does not represent works done by any other HCPs works in Maldives.

The study used data of events or tasks performed by selected individual HCP with intention to create awareness, thus no human subjects were involved directly in data collection or human related data were collected, henceforth no ethical approval from National Health Research Council was required.

The findings

The study included total of 359 events or tasks performed by selected HCP to create awareness using various awareness methods and medium among diverse population across the nation. As the study is descriptive in nature, descriptive analysis of all the variable were executed.

Variable	N	%	Variable	N	%
1.Years of awareness			5.Topics of awareness		
2010	5	1.4%	NCD	44	12.3%
2011	6	1.7%	CD	43	12.0%
2012	24	6.7%	Tobacco hazards& cessation	62	17.3%
2015	28	7.8%	Services & HS & events	15	4.2%
2016	45	12.5%	Elderly health	14	3.9%
2017	49	13.6%	Ramadan & Health	38	10.6%
2018	24	6.7%	Covid 19	12	3.3%
2019	23	6.4%	Antibiotic, its resistance	9	2.5%

2020	65	18.1%	Mental Health	6	1.7%
2021	14	3.9%	Hajju & Umrah & Health	14	3.9%
2022	35	9.7%	Adolescent Health	9	2.5%
2023	41	11.4%	Nutrition & Diet	31	8.6%
2.Months of awareness			Others	62	17.3%
January	31	8.6%	6.Methods of awareness		
February	33	9.2%	Radio Discussion	84	23.4%
March	58	16.2%	TV Discussion	56	15.6%
April	30	8.4%	Radio Interview	42	11.7%
May	37	10.3%	Phone Interview	42	11.7%
June	44	12.3%	Video Interview	17	4.7%
July	40	11.1%	PPT, or open discussion	47	13.1%
August	22	6.1%	Speech or talk	13	3.6%
September	15	4.2%	News Paper article	54	15.0%
October	20	5.6%	Others	4	1.1%
November	11	3.1%	4.Stations of awareness		
December	14	3.9%	PSM Radio	154	42.9%
don't know	4	1.1%	PSM TVM	32	8.9%
3.Source of awareness			VTV	9	2.5%
Radio	173	48.2%	Raajje TV	8	2.2%
TV	62	17.3%	Sun TV	6	1.7%
Social media	5	1.4%	Radio Atoll	5	1.4%
Multiple Media	2	.6%	Chanel 13	4	1.1%
Documentary	2	.6%	Dheenuge Adu	10	2.8%
Awareness Session	47	13.1%	NewsPaper Sunonline	29	8.1%
Assembly talk	13	3.6%	News Paper Haveeru	25	7.0%
Printing Media	54	15.0%	School, or college	33	9.2%
Others	1	.3%	Health Facility	6	1.7%
7. streaming status			Other Institutions, NGO	21	5.8%
Recorded programs	148	41.2%	Others	17	4.7%
Live programs	97	27.0%	8.Ramadan & Health		
Others medical article	54	15.0%	Yes	38	10.6%
Live sessions or talks	60	16.7%	No	321	89.4%
9.Hajj, Umrah&Health					
Yes	14	3.9%			
No	345	96.1%			

Year of awareness

Descriptive statistics of awareness conducted based on the “year of awareness” conduction identified highest number of awareness activity or events took place in the year 2020 with percentage of 18.1 % (n=65), followed by 13.6% (n=49), 12.5% (n=45), 11.4% (n=41), 9.7% (n=35), respectively for the years 2017, 2016, 2023, and 2022.

Month of awareness

The descriptive statistics for the variable “month of awareness” showed that majority of awareness events took place in the month of March which is 16.2% (n=58), followed by 12.3% (n=44), 11.1% (n=40), 10.3% (n=37) and 9.2% (n=33) respectively for the months June, July, May and February. Almost equal number of awareness events took place in the months of January and April with 8.6% (n= 31) and 8.4% (n=30) for both months respectively. The findings showed that the least number of awareness events occurred in the month of November which is 3.1% (n=11).

Sources of awareness

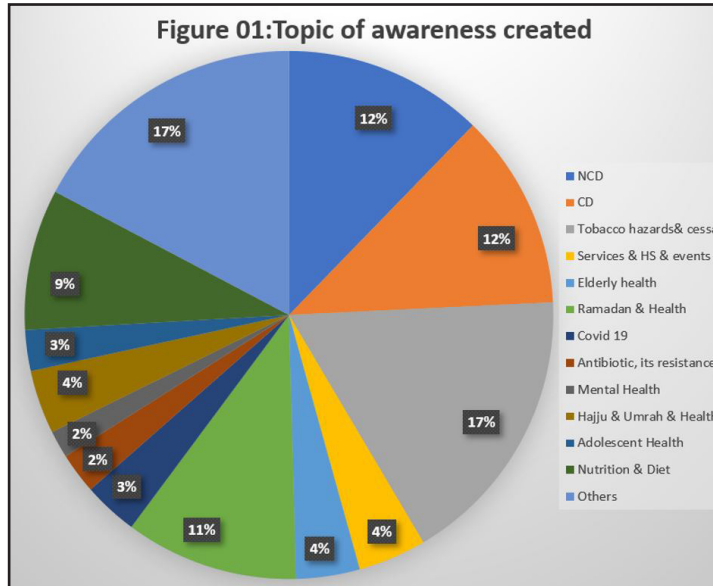
The descriptive statistics for the variable “sources of awareness” showed that majority of awareness events took place in the radio programs as sources of health awareness with 48.2% (n=173) which is almost of half of the awareness events made. This was followed by 17.3% (n=62), 15.0%(n=54), 13.1%(n=47) respectively for the TV, printing media and awareness sessions as source of health awareness. The findings also showed that the selected health care provider had taken part in 13 (3.6%) different school assemblies during the last 14 years period to provide health awareness.

Station or place of the awareness

The current study revealed that public service media’s main radio channel, Voice of Maldives (VOM) was the station where most (42.9%, n=154) of the health awareness events took place in the form of radio programs. Likewise, the study revealed that 9.2% (n=33) of health awareness took place at schools in the form of assembly talk or awareness session, however not all the sessions occurred at schools are targeted to school children, rather to public or those who are travelling to Hajj & Umrah via various groups. This was followed by 8.9% (n=32) which took awareness event at public service media TV channel, Television Maldives (TVM) in various forms including discussions and interviews. This was followed by awareness events occurred through printing media in the form of medical articles under the umbrella of health column in daily papers with the percentages of 8.1% (n=29) and 7.0% (n=25) respectively for both Sun online and previously published known daily newspaper Haveeru news. The fewest TV programs participated by selected HCP took place from Channel 13 with 1.1% (n=4), while the fewest of radio programs were occurred at radio atoll with 1.4% (n=5).

Distribution of awareness based on topic

Descriptive statistics of the variable “topics of awareness” (figure1) shows that most frequently spoken topic during the awareness events was tobacco including its hazards and cessation tips and prevention of second-hand smoke exposure with 17.3 % (n=62). The second most highlighted topic was various topics related to health with 17.3% (n=62). This was followed by NCD (12.3%, n=44), CD (12.0%, n=43), Ramadan & health (10.6%, n=38) and nutrition and diet (8.6%, n=31). The study revealed mental health as rarest spoken topic with percentage of 1.7% (n=6). In addition, the selected HCP had spoken almost equally (3.9%, n=14) about Hajju, Umura & Health, and elderly health. Furthermore, in 15 (4.2%) awareness activities were targeted to create awareness about the services of institution where the selected HCP works, while 12 (3.3%) events were used to talk on Covid 19 and 2.5% (n=9) of awareness events were utilized to talk on adolescent health.



Distribution of awareness based on method

The present study demonstrated radio discussion as major method of awareness which is 23.4% (n=84) of all the methods, followed by 15.6% (n=56), 15.0% (n=54), 13.1% (n=47), 11.7% (n=42) and 11.7% (n=42) respectively for TV discussion, medical article in newspaper, ppt presentations, phone interviews and radio interviews. In addition, 4.7% (n=17) and 3.6% (n=13) of awareness were made through methods like video interview and speech or talk at schools or college respectively.

Streaming status

The present study concluded that the selected HCP has contributed to awareness majorly through recorded programs which is 41.2% (n=148) followed by live programs 27% (n= 97). Furthermore, the selected HCP also had taken part in live sessions in the form of ppt presentation 60 times which contributed 16.7% of awareness made. This was followed by 15% (n=54) of awareness which was made using media articles published in local newspapers.

Ramadan & Health

The presented study has reviewed the amount of awareness created towards health concerns related to Ramadan & Health. It was identified that 10.9% (n=38) of awareness were conducted specifically with regard to Ramadan & health. Most of this awareness were created in the form of medical articles published in daily newspapers, radio and tv programs in the form of discussion or interviews, and most of the programs talked with regard to Ramadan & Health were on aired during the Holly month of Ramadan.

Hajj & Umrah & Health

The current study demonstrated that the selected HCP had conducted awareness about Hajj-Umrah related concern around 14 times (3.9%) in the past 14 years, which is mostly in the form of awareness sessions organized by Hajj & Umrah groups targeting the people who are going Hajj & Umrah via distinct groups. Most of these awareness sessions were held either at a school hall or a hall belong to government institutions.

Table 2: Distribution of awareness based on programs	N	%
10. Programs of awareness		
Dhulhaheyo_VOM	21	5.8%
Dhunfaiy Magey Dhushmin_VOM	15	4.2%
Koshaaru_VOM	23	6.4%
Rakkaavethibiyya Dhathuru_VOM	11	3.1%
Baajjaveri Hendhuneh_VOM	19	5.3%
Samaalu_VOM	9	2.5%
Kulunuveri Hitahkun_VOM	9	2.5%
Adhuge Raajje_VOM	7	1.9%
Sufuraamathin_VOM	9	2.5%
Sihhathuge Niumaiy_VOM	7	1.9%
Magey Raaaje_TV	6	1.7%
Hendhu Hendhunaa_TV	8	2.2%
Dhamana_Radio Atoll	4	1.1%
Dhurala Rakkatherivashey_VOM	4	1.1%
NEWS_TV	13	3.6%
Hissuthakuge Niumaiy	9	2.5%
Khabaru Feetha_RT	4	1.1%
Dhulhaheyo_SUNTV	3	.8%
Fasmanzaru_VT	2	.6%
Falasarukhee_RT	2	.6%
Daily Morning Show_VT	2	.6%
Health Line_SUNTV	2	.6%
DHulhaheyo_DhiFM	2	.6%
13Gadi_CH13	2	.6%
HealthCare_DhivehiCH	2	.6%
Column_News paper	54	15.0%
Awareness session or talk or discussion	60	16.7%
Others	50	13.9%

Distribution of awareness based on programs

According to the present study, the selected HCP has conducted 60 (16.7%) awareness events in the form of awareness sessions, assembly talks or group discussions which is the majority of programs through which health awareness were created. This was followed by medical articles 15.0 % (n=54) written under umbrella of health column and published in daily newspapers, followed by other programs as 50 health awareness events or tasks which is 13.9% of total programs considered as health awareness event. However, both awareness sessions and media

articles are not considered as media programs (table2).

When looking into radio programs the selected HCP has contributed 23 times (6.4%) to Koshaaru by Voice of Maldives, PSM, followed by Dhulhaheyo-VOM (5.8%, n= 21), Baajjeveri Hendhunch – VOM (5.3%, n= 19), Dhunfaiy Magey Dhushmin-VOM (4.2%, n=15), and Rakkaavethibiyya Dhathuru-VOM (3.1%, n=11).

It is also identified that selected HCP has given huge contribution or equal amount of participation (2.5%, n=9) to certain programs produced by voice of Maldives. This includes Samaalu-VOM produced in the year 2022, Sufuraaamathin-VOM produced in the year 2020, Hissuthakuge Niumaiy-VOM produced in the year 2023 and Kulunuveri Hithakun-VOM produced in the year 2016 & 2021. Furthermore, the selected HCP had covered all the episodes of one whole program of Voice of Maldives which is Dhunfaiy Magey Dhushmin, to which the selected HCP gave consultancy as well gave interviews to all 15 episodes of the program which is 4.2% (n=15) of total awareness programs, the selected HCP participated.

Likewise, it is noted that the selected HCP had given consultancy also to some programs mentioned priorly such as Samaalu made to create awareness on rational antibiotic use and antibiotic resistance, Sufuraaamathin made to create awareness targeting healthy eating to various groups in the community and Hissuthakuge Niumaiy produced by voice of Maldives.

The most frequently participated tv programs by selected HCP was TVM-news which is 3.6% (n=13), followed by 2.2% (n=8) and 1.7% (n=6) respectively for both Hedhunu Hedhunaa and Magey Raajje by TVM, public service media.

Discussion

The presented study was conducted to identify the pattern of health awareness by a selected health care provider. The current study revealed the year 2020 and Month of March as year and month where the highest number of awareness activity took place with percentage of 18.1% (n=65) and 16.2% (n=58) respectively for the year 2020 and month of March.

According to present study, approximately half of health awareness events (48.2% n=173) were made utilizing radio programs as source of health awareness and public service media radio channel, Voice of Maldives (VOM) was the main station or place where more than 2/3 (42.9% n=154) of awareness events took place. The present study demonstrated radio discussion as major method of awareness which is 23.4% (n=84) of all the methods, followed by 15.6% (n=56), 15.0% (n=54), 13.1% (n=47), 11.7% (n=42) and 11.7% (n=42) respectively for TV discussion, medical article in newspaper, ppt presentations, phone interviews and radio interviews. This indicates that majority of the community especially in the islands get health information through radio as a source, which is in accordance with findings by Husna & Waheed (1985) which showed radio as most extensively utilized form of mass media used to create health awareness among public in Maldives. A study conducted by Ganguly & Kanjilal (2017) reported that 44 % get information on health awareness from television, 5% from daily newspaper, 73% from radio, 12% from health workers and 25% from local doctors. Furthermore, a Tanzanian study showed radio followed by TV and newspaper with percentages of 34%, 29%, and 17% respectively as the most frequently used media in Tanzania (Nilsson, 2014).

Tobacco hazards including risk of second-hand smoke exposure and tobacco cessation tips were the major topic talked during health awareness events or programs with 17.3 % (n=62). This could be due to increasing prevalence (Male 35.6% , female 7.6%) of tobacco use and second hand smoke exposure (33% expose SHS at home) in Maldives and thus subsequently the selected health care provider could get more opportunities to talk or was asked more to talk about tobacco hazards and risk of SHS exposure and tobacco cessation tips. The second most highlighted topic was various topics related to health with 17.3% (n=62). This was followed by NCD (12.3%, n=44), CD (12.0%, n=43), Ramadan & health (10.6%, n=38) and nutrition and diet (8.6%, n=31). Awareness on NCDs were created relatively higher in compare to some other topics. This could be as NCDs are responsible for 84% of mortality in Maldives (WHO, 2018).

The present study concluded that the selected HCP has contributed to awareness majorly through recorded programs which is 41.2% (n=148) followed by live programs 27% (n= 97). It also concluded that the selected HCP provider talked on Ramadan and health in 38 (10.9%) different events and on Hajj, Umrah & Health in 14 (3.9%) different health awareness activities.

Recommendation

As this is a case of selected individual HCP working in Maldives, a further more extensive research is required to identify the characteristics of health awareness conducted by health care providers working in Maldives to obtain clearer scene. Future studies can be focused to examine the differences in creating health awareness among different health care providers in Maldives. In addition, further studies can also be done to investigate the effectiveness of different communication channels to reach diverse population. The findings can be presented to a conference targeted to medical community in order to motivate other health care providers working in Maldives.

Conclusion

The present study concluded radio as major source of health awareness and radio channel as main station where majority of awareness occurred and radio discussion as main method of health awareness. Non communicable disease, tobacco hazards, second hand smoke exposure, cessation tips and communicable diseases were major topics of awareness created. As this is first of this kind of study as per the primary researcher's knowledge, this would be considered as a baseline study which can be used as a reference in forthcoming studies.

References

- Ahmad, A. R., & Murad, H. R. (2020). The impact of social media on panic during the COVID-19 pandemic in Iraqi kurdistan: Online questionnaire study. *Journal of Medical Internet Research*, 22(5). <https://doi.org/10.2196/19556>
- Adebisi, Y. A., Rabe, A., & Lucero-Prisno III, D. E. (2021). Risk communication and community engagement strategies for covid-19 in 13 African countries. *Health Promotion Perspectives*, 11(2), 137–147. <https://doi.org/10.34172/hpp.2021.18>

- Atakiti, I.O & Ojomo, O.W. (2015). Influence of television health programmes on maternal health. *International journal of humanities and social sciences*. 5 (8), 170-180. https://www.ijhssnet.com/journals/Vol_5_No_8_1_August_2015/23.pdf
- Ali, M. Y., & Bhatti, R. (2020a). Covid-19 (coronavirus) pandemic: Information sources channels for the Public Health Awareness. *Asia Pacific Journal of Public Health*, 32(4), 168–169. <https://doi.org/10.1177/1010539520927261> .
- Anna Nillson. (2014). Using mass media as channel for healthcare information – A minor field study of audience’s media preferences in Dar es Salaam, Tanzania. *Institute of social science*, Souderton university.
- All Ireland Institute of Palliative Care. (2014). Public Awareness Campaign: Report on Public Awareness Raising, Palliative Care Week 2014, October 6–11. Dublin, Ireland: *All Ireland Institute of Hospice and Palliative Care*, pp. 1–27.
- Al-Dmour, H., Masa’deh, R., Salman, A., Al-Dmour, R., & Abuhashesh, M. (2022). The role of mass media interventions on promoting public health knowledge and behavioral social change against covid-19 pandemic in Jordan. *SAGE Open*, 12(1), 215824402210821. <https://doi.org/10.1177/21582440221082125>
- Aminath Riyaz. (2009). The information culture of the Maldives: An exploratory study of information provision and access in a small island developing state. Faculty of humanities, Curtin University of technology.
- Berry, T. R., Spence, J. C., Plotnikoff, R. C., Bauman, A., McCargar, L., Witcher, C., Clark, M., & Stolp, S. (2009). A mixed methods evaluation of televised health promotion advertisements targeted at older adults. *Evaluation and Program Planning*, 32(3), 278–288. <https://doi.org/10.1016/j.evalprogplan.2009.05.001>
- Beaudoin, C. E., Fernandez, C., Wall, J. L., & Farley, T. A. (2007). Promoting healthy eating and physical activity: Short-term effects of a mass media campaign. *American Journal of Preventive Medicine*, 32(3), 217–223.
- BESSOUS, N., & Bouras, F. (2022). The role of television in raising the level of health awareness and health practice among the Algerian family in light of the covid 19 pandemic - a field study on families in neighborhood 08 May 1945, in El-Oued City. *EUROASIA JOURNAL OF SOCIAL SCIENCES & HUMANITIES*, 9(2), 9–27. <https://doi.org/10.38064/eurssh.318>
- Colby, S. E., Johnson, A. L., Eickhoff, A., & Johnson, L. (2009). *Promoting Community Health Resources: Preferred Communication Strategies*. *Health Promotion Practice*, 12(2), 271–279. <https://doi.org/10.1177/1524839909333055>
- Catalan-Matamoros, D. (2011). The role of Mass Media Communication in Public Health. *Health Management - Different Approaches and Solutions*. <https://doi.org/10.5772/22790>
- Chioma, P.E. (2014). A comparative evaluation of the pre and post deregulation challenges of broadcasting in Nigeria. *Journal of research and development*, 1,(8), 16-26.
- Clayman, M. L., Manganello, J. A., Viswanath, K., Hesse, B. W., & Arora, N. K. (2010). Providing health messages to hispanics/latinos: Understanding the importance of language, trust in health information sources, and media use.

- Journal of Health Communication*, 15(sup3), 252–263. <https://doi.org/10.1080/10810730.2010.522697>
- Clark, F., & Illman, D. L. (2006). *A longitudinal study of the New York Times Science Times section*. *Science Communication*, 27(4), 496–513. <https://doi.org/10.1177/1075547006288010>
- Cooper, C. P. (2000). “if it bleeds it leads”? attributes of TV Health News stories that drive viewer attention. *Public Health Reports*, 115(4), 331–338. <https://doi.org/10.1093/phr/115.4.331>
- Chidinma, U. J. (2019). Influence of Broadcast Media Messages on Awareness, Perception and Attitude of Maternal Health Among Reproductive Women in Ilorin. *African Journal of Social Sciences and Humanities Research*, 2(1), 57–116.
- Criss, S., Woo Baidal, J. A., Goldman, R. E., Perkins, M., Cunningham, C., & Taveras, E. M. (2015). The role of health information sources in decision-making among Hispanic mothers during their children’s first 1000 days of life. *Maternal and Child Health Journal*, 19(11), 2536–2543. <https://doi.org/10.1007/s10995-015-1774-2>
- Cohen, E. L., Caburnay, C. A., Luke, D. A., Rodgers, S., Cameron, G. T., & Kreuter, M. W. (2008). Cancer coverage in general-audience and Black Newspapers. *Health Communication*, 23(5), 427–435. <https://doi.org/10.1080/10410230802342176>
- Dutta-Bergman, M. J. (2004). Primary sources of health information: Comparisons in the domain of Health Attitudes, health cognitions, and health behaviors. *Health Communication*, 16(3), 273–288. https://doi.org/10.1207/s15327027hc1603_1
- Durkin, S., & Wakefield, M. (2009). Comparative responses to radio and television anti-smoking advertisements to encourage smoking cessation. *Health Promotion International*, 25(1), 5–13. <https://doi.org/10.1093/heapro/dap044>
- Dr. Md. Mamun-ur-Rashid (2019). Community Radio in Family Health and Nutrition Awareness Building among the Listeners. Department of Agricultural Extension and Rural Development. *Patuakhali Science and Technology University*. Bangladesh.
- Dhaar, G. M., & Robbani, I. (2008). *Foundations of Community Medicine*. Elsevier.
- Diedong, A. L. (2013). Covering Health Issues: The Role of Newspapers in Ghana. *International Journal of Humanities and Social Science*, 3(12), 46–51. Retrieved from: https://www.ijhssnet.com/journals/Vol_3_No_12_Special_Issue_June_2013/5.pdf
- Davidson, A. E., & Wallack, L. (2004). A content analysis of sexually transmitted diseases in the Print News Media. *Journal of Health Communication*, 9(2), 111–117. <https://doi.org/10.1080/10810730490425268>
- Ewart, J. (2011). Therapist, companion, and friend: The under-appreciated role of talkback radio in Australia. *Journal of Radio & Audio Media*, 18(2), 231–245. <https://doi.org/10.1080/19376529.2011.615775>
- Effiom Ephraim, P. (2021). The potentials of radio in combating misinformation

- about covid-19 in Nigeria. *Fake News Is Bad News - Hoaxes, Half-Truths and the Nature of Today's Journalism*. <https://doi.org/10.5772/intechopen.93949>
- Effiong, A. I., Nseobot, I. R., Johnny, & A. E., J. M. U., Frank, E. I., Johnally, A., Omotayo, Essien, M. O., Ukpong, E. S., & U P, A. (2020). Assessment of Nigerian Television Authority (NTA) Ongoing Programme Awareness Campaigns on Corona Virus in Nigeria. *Electronic Research Journal of Social Sciences and Humanities*, 2(1), 130–141.
- Godlee, F., Pakenham-Walsh, N., Ncayiyana, D., Cohen, B., & Packer, A. (2004). Can we achieve health information for all by 2015? *The Lancet*, 364(9430), 295–300. [https://doi.org/10.1016/s0140-6736\(04\)16681-6](https://doi.org/10.1016/s0140-6736(04)16681-6)
- Ganguly, M., & Kanjilal, R. (2017). *Role of Media in Spreading Awareness on Health Issues in the Southern Fringes of Kolkata*.
- Gupta, A., & Sinha, A. K. (2010). Health coverage in mass media: A content analysis. *Journal of Communication*, 1(1), 19–25. <https://doi.org/10.1080/0976691x.2010.11884766>
- Gollust, S. E., & Lantz, P. M. (2009). Communicating Population Health: Print news media coverage of type 2 diabetes. *Social Science & Medicine*, 69(7), 1091–1098. <https://doi.org/10.1016/j.socscimed.2009.07.009>
- Innocent Kasarachi Hayford. (2023). Radio Health Programmes and menopause awareness among women of Perimenopausal age in Rivers State, south-south nigeria. *Formosa Journal of Multidisciplinary Research*, 2(5), 983–998. <https://doi.org/10.55927/fjmr.v2i5.3853>.
- Julian C.G, Okereke.S.I, Azubike.J.N, Nwaesi.J.R (2021). Influence of radio health programmes towards awareness creation of the covid 19 pandemic outbreak: A survey of residents of Owerri Municipal. *IMSU Journal of Communication Studies*, Vol. 5, 2021 33.
- Johnson, C. A. (2007). Social Capital and the search for information: Examining the role of social capital in information seeking behavior in Mongolia. *Journal of the American Society for Information Science and Technology*, 58(6), 883–894. <https://doi.org/10.1002/asi.20561>
- Jamshed, S., Shakeel, S., Nesar, S., Rahim, N., Iffat, W., Ahmed, H. F., & Rizvi, M. (2017). Utilization and impact of electronic and print media on the patients' health status: Physicians' perspectives. *Journal of Pharmacy And Bioallied Sciences*, 9(4), 266. https://doi.org/10.4103/jpbs.jpbs_327_16
- Krause, A. E., Lloyd-Smith, A., & Hajek, J. (2020). The role of Community Language Radio for understanding creativity and wellbeing in migrant communities in Australia. *International Journal of Wellbeing*, 10(5), 83–99. <https://doi.org/10.5502/ijw.v10i5.1495>
- Konye Cynthia Ikmes (2021). The coverage of health related programmes by radio stations operating in Port Harcour Local Government Area. *Icheke Journal of the Faculty of Humanities*.
- Korownyk, C., Kolber, M. R., McCormack, J., Lam, V., Overbo, K., Cotton, C., Finley, C., Turgeon, R. D., Garrison, S., Lindblad, A. J., Banh, H. L., Campbell-Scherer, D., Vandermeer, B., & Allan, G. M. (2014). Televised

- medical talk shows--what they recommend and the evidence to support their recommendations: A prospective observational study. *BMJ*, 349(dec17 11). <https://doi.org/10.1136/bmj.g7346>
- Liu, S., Cai, L., & Zhao, X. (2018). The role of mass media in education policies: A Chinese case study. *Journal of Higher Education Policy and Management*, 41(2), 186–203. <https://doi.org/10.1080/1360080x.2018.1554548>
- Lawrence, J.J. (2012). Health programming and community-based radio stations in Sub-Saharan Africa: An example from Zambia. *Journal of Reproductive Contraceptive, Obstetrics/Gynaecology*, 5(7), 57-61. Retrieved from https://d-scholarship.pitt.edu/11912/1/Lawrence_Thesis_ETD_format.pdf
- Luth, W., Jardine, C., & Bubela, T. (2013). When pictures waste a thousand words: Analysis of the 2009 H1N1 pandemic on television news. *PLoS ONE*, 8(5). <https://doi.org/10.1371/journal.pone.0064070>
- Mazumder B.H. (2019). Role of mass media and the Indian democracy. *International Journal of Media Culture Politics*:258.
- Mollyann Brodie, Nina Kjellson, Tin. (1999). Perceptions of latinos, African Americans, and whites on media as a health information source. *Howard Journal of Communications*, 10(3), 147–167. <https://doi.org/10.1080/106461799246799>
- Ministry of Health - MOH Maldives, & Icf. (2018, November 1). Maldives DHS, 2016-17 - *final report (English)*. Maldives: DHS, 2016-17 - Final Report (English). <https://dhsprogram.com/publications/publication-fr349-dhs-final-reports.cfm>
- Mohamed Waheed & Husna Raze. (1985). Promotion of health awareness in Maldives: constraints faced and suggestions for future action. In AMIC-WHO-UNICEF-IPDC Roundtable on Health and Mass Media:a partnership in the public interest, Colombo, September 11-13, 1985. Singapore, Asian Mass Communication Research & Information Centre
- Ministry of Health. (2020). Maldives Health Statistics 2020. Ministry Of Health. Maldives. <https://health.gov.mv/storage/uploads/BkoMELod/utbdxbkp.pdf>
- Maldives Medical Association. (2023). Annual General Meeting 2023. MMA. Male' Maldives.
- Ministry Of Health. (2016). National standards for adolescent and youth friendly health services for all young people: standard statements and implementations steps. Ministry of Health. Maldives
- Marx, J. J., Gube, C., Faldum, A., Kuntze, H., Nedelmann, M., Haertle, B., Dieterich, M., & Eicke, B. M. (2009). An educational multimedia campaign improves stroke knowledge and risk perception in different stroke risk groups. *European Journal of Neurology*, 16(5), 612–618. <https://doi.org/10.1111/j.1468-1331.2009.02555.x>
- Meekers, D., Van Rossem, R., Silva, M., & Koleros, A. (2007). The reach and effect of radio communication campaigns on condom use in Malawi. *Studies in Family Planning*, 38(2), 113–120. <https://doi.org/10.1111/j.1728-4465.2007.00122.x>
- McGee, R., Bang, S., & Marsh, L. (2014). Newspaper coverage of Tobacco

- Control in New Zealand. *Australian and New Zealand Journal of Public Health*, 38(3), 265–269. <https://doi.org/10.1111/1753-6405.12216>
- Moyer, A., Greener, S., Beauvais, J., & Salovey, P. (1995). Accuracy of Health Research reported in the popular press: Breast cancer and mammography. *Health Communication*, 7(2), 147–161. https://doi.org/10.1207/s15327027hc0702_4
- Maheshwar, M., & Raghunatha Rao, D. (2012). Quantitative Analysis of Nutrition and Health Messages in Indian print media. *Public Health Research*, 2(2), 28–31. <https://doi.org/10.5923/j.phr.20120202.05>
- Mujtaba, R. (2011). Mass media and its influence on society
<http://www.opinionmaker.org/2011/.../mass-media-and-its-influence-on-society>.
- Ndimele, O. & Innocent, K.H. (2006), *Fundamentals of Mass Communication*, Port Harcourt: M. & J. Grand Orbit Communications Ltd.
- Noar, S. M. (2006). A 10-year retrospective of Research in Health Mass Media Campaigns: Where Do We Go From here? *Journal of Health Communication*, 11(1), 21–42. <https://doi.org/10.1080/10810730500461059>.
- Ngonso, B. F., & Chukwu, O. J. (2021). Covid-19 pandemic's broadcast media messages' consumption in rural community and Behavioral Change. *International Journal of Communication and Society*, 3(1), 12–19. <https://doi.org/10.31763/ijcs.v3i1.185>
- Nabi, R. L., & Oliver, M. B. (2009). *The sage handbook of media processes and effects*. SAGE.
- Olaoye, A., & Onyenankeya, K. (2023a). A systematic review of health communication strategies in Sub-Saharan Africa-2015-2022. *Health Promotion Perspectives*, 13(1), 10–20. <https://doi.org/10.34172/hpp.2023.02>
- Olaoye, A., & Onyenankeya, K. (2023b). Effectiveness of *mdantsane fm* community radio in health information promotion among residents of Eastern Cape Province, South Africa. *Information Development*. <https://doi.org/10.1177/02666669231187362>
- Parmar Shubhda. (2020). The Important Role of Mass Media in Education. *Journal of Emerging Technologies and Innovative Research*. 7(2):1133-1137.
- Thomas, J., Peterson, G. M., Walker, E., Christenson, J. K., Cowley, M., Kosari, S., Baby, K. E., & Naunton, M. (2018). Fake news: Medicines misinformation by the Media. *Clinical Pharmacology & Therapeutics*, 104(6), 1059–1061. <https://doi.org/10.1002/cpt.1199>
- Primack, B. A., Wickett, D. J., Kraemer, K. L., & Zickmund, S. (2010). Teaching health literacy using popular television programming. *American Journal of Health Education*, 41(3), 147–154. <https://doi.org/10.1080/19325037.2010.10598856>
- Paul, S., & Singh, A. (2016). Coverage of health-related articles in major local newspapers of Manipur. *Journal of Education and Health Promotion*, 5(1), 3. <https://doi.org/10.4103/2277-9531.184567>

- Redmond, N., Baer, H. J., Clark, C. R., Lipsitz, S., & Hicks, L. S. (2010). Sources of health information related to preventive health behaviors in a national study. *American Journal of Preventive Medicine*, 38(6). <https://doi.org/10.1016/j.amepre.2010.03.001>
- Raheema Abdul Raheem & Sheena Moosa (2022). WHO STEP Survey on risk factors for non-communicable disease -Maldives -2020-2021. Maldives National University. Maldives. <https://mnu.edu.mv/wp-content/uploads/2024/01/Survey-On-Prevalence-of-Non-Communicable-Disease-STEP-Survey-2020-2021.pdf>
- Smith, M. L., Menn, M., & McKyer, E. L. (2011). Effectiveness of the radio as a health information source. *Journal of Radio & Audio Media*, 18(2), 196–211. <https://doi.org/10.1080/19376529.2011.615776>
- Saleem, A., Rizvi, W. R., & Saleem, M. (2021a). The impact of radio programs on infrastructure development in Central Punjab, Pakistan. *Pakistan Journal of Social Research*, 03(03), 271–283. <https://doi.org/10.52567/pjsr.v3i3.249>
- Saleem, A., Rizvi, W. R., & Saleem, M & Awais.A. (2021b). Impact of Radio Programs on the Healthcare of listeners in Pakistan. *Psychology and Education*. (2021) 58(1): 6652-6656.
- Stilwell, C., Leach, A., & Burton, S. (2001). *Knowledge, information and development: An African perspective*. School of Human and Social Studies, University of Natal.
- Shree ,V., & Chauhan, R. (2023). Role of Media in Health Awareness in Himachal Pradesh During the Covid-19 Pandemic. *International Journal of Research Publication and Reviews*, 4(6), 877–883.
- Saei, M., Valadi, S., Karimi, K., & Khammarnia, M. (2021). The role of Mass Media Communication in Public Health: The impact of islamic republic of iran broadcasting health channel on Health Literacy and health behaviors. *Medical Journal of The Islamic Republic of Iran*. <https://doi.org/10.47176/mjiri.35.54>
- Shojaeifar, M., Niknami, S., Mirbalochzahi, A., Khammarnia, M., & Khorram, A. (2017). Comparison of the effect of educational methods on students' knowledge, attitude and behavior about hookah smoking. *Electronic Physician*, 9(2), 3870–3877. <https://doi.org/10.19082/3870>
- Torwel, V., & Rodney, C. (2010). Newspaper coverage of health issues in Nigeria. *African Communication Research* 3(2), 235-251.
- United Nations. (2020). *UN radio spreads covid-19 information to remote areas*. United Nations. <https://www.un.org/en/un-coronavirus-communications-team/un-radio-broadcasts-spread-covid-19-information-remote-areas>. Retrieved from <http://www.un.org>.
- World Health Organization. (2018). Noncommunicable diseases Maldives 2018 country profile. Retrieved from: https://cdn.who.int/media/docs/default-source/country-profiles/ncds/mdv_en.pdf
- World Health Organization. (2011). WHO STEP Survey on risk factors for non-communicable disease -Maldives,2011. Health Protection Agency. Maldives