ADDIS ABABA UNIVERSITYSCHOOL OF COMMERCE

GRADUATE STUDIES

ASSESSMENT OF USE OF FACE MASK BY CABIN CREW DURING THE COVID-19 PANDEMIC: A CASE OF ETHIOPIAN AIRLINES

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Assessment of Use of Face Mask by Flight Attendants during the COVID-19 Pandemic: a case of Ethiopian Airlines

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A Project Work Submitted to the School of Graduate Studies of AAU in Partial Fulfillment of the Requirements for the Award of Master of Arts Degree in Project Management (MAPM)

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MASTER OF ARTS DEGREE IN PROJECT MANAGEMENT

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Approved by Board of Examiners

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Dedication

I, the undersigned, declare that this study entitled as "**Assessment of Use of Face Mask by Cabin Crew during the COVID-19 Pandemic: a case of Ethiopian Airline**", is my own work. I have carried out all the research project works independently with the guidance and support of the research advisor. This study had not been submitted to any degree/diploma in this school or any other institution.

Haben Iyassu

Signature: _____

Date: _____

CERTIFICATION

This is to certify that this project work, "Assessment of Use of Face Mask by Cabin Crew during the COVID-19 Pandemic: a case of Ethiopian Airlines" which is undertaken by Haben Iyassu in partial fulfillment of the award of Master's degree in Project Management at Addis Ababa University School of Commerce, is an original work of her own and not submitted earlier for any degree either at this University or at any other University.

Dr. Atsede Tesfaye

Project Work Advisor

Date

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I would like to God-my savior Jesus Christ who has given me a caring & intelligent Kidist Negash whom I can't imagine doing this without. I would also like to thank my loving husband Samuel Kebebew and the rest of my family, friends, and colleagues for supporting me. Most of all, my advisor Dr. Atsede Tesfaye –Thank you for making it a smooth journey

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ACRONYMS AND ABBREVIATION

ACI: Airports Council International

EAL: Ethiopian Airlines

CANSO: The Civil Air Navigation Services Organization

COVID-19: Coronavirus Disease 2019

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ISSA: International Social Security Association

KAP: Knowledge, Attitude and Practice

N95: Masks filtering > 95% of particles and droplets

OHS: Occupational Safety and Health

PPE: Personal Protective Equipment

SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus 2

TIACA: The International Air Cargo Association

TQM: Total Quality Management

WHO: World Health Organization

C/C: Cabin Crew

ABSTRACT

Coronavirus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease has spread worldwide, leading to an ongoing pandemic. Cabin Crew are still working and providing essential service to our nation which exposes them to occupational health risk. The purpose of this study is to assess cabin crew's knowledge, attitude and practice of face masks in Ethiopian Airlines. In the face of the COVID-19 crisis, effective occupational preventive and control measures have a positive effect on business continuity and employment, as they assist to prevent or avoid further outbreaks, which could lead to additional economic and social disruption. A cross-sectional descriptive study was conducted between December 2020 and March 2021 among 360 Cabin crew professionals working in Ethiopian Airlines. Data was collected using self-administered structured questionnaire. Data entry, analysis and quality of data were maintained by SPSS version 23 software. The study demonstrated that the cabin crew in Ethiopian Airlines had overall good knowledge, attitude and practice. There was positive and significant correlation between knowledge-practice, knowledge-attitude, and attitude-practice. The findings from this study suggest an investigation in to factors that affect the proper use of face masks. The author suggests that providing guidance on correct usage is still essential to encourage the use of face masks so as to prevent COVID-19 and maintain occupation health and safety.

Key words: Face mask, COVID-19, Knowledge, Attitude, Practice, Cabin Crew

CHAPTER ONE

INTRODUCTION

This chapter presents an introduction giving a general idea of the study. It starts with the research background by giving a brief idea on the ongoing pandemic which is Covid-19 and followed by the problem statement, research objectives, research questions, significance of the study and Disposition of thesis.

1.1 Background of the study

Worldwide almost 2.4 million people die due to an occupational disease, compared to 0.38 million that die because of a work accident (ISSA, 2020). Occupational health and safety studies are becoming more important than ever before. The organizations should make every effort to increase the safety of working conditions for their employees. This in turn, increases the moral, motivation, working ethics etc. which directly influence the quality of the work carried out. On December 2019, the first human case of COVID-19 was reported by officials in Wuhan City, China and later WHO issued its first share of technical guidance. Since then, the virus had an alarming rate of spread and severity. On March 2020, WHO made the assessment that COVID-19 can be characterized as a pandemic. According to WHO's remark on January 11, 2021 there have been almost 2 million deaths from the COVID-19 virus.

Diseases such as COVID-19 pose a risk to the travelling public because they can be transmitted between humans. Therefore, it is important that all involved stakeholders assist in limiting its spread by air transport. ICAO, ACI, CANSO, IATA, TIACA, WFP and WHO have worked in close cooperation in the development aviation-specific guidelines with the objective of ensuring appropriate planning and action at all levels in order to mitigate the effects of a human outbreak. People's adherence to control measures is affected by their knowledge, attitude and practices towards COVID-19. In this study, we investigated cabin crew's knowledge, attitude and practice towards COVID-19 during the rapid rise period of the outbreak. Good knowledge, a positive attitude and good practice of C/C about protective measures such as using a facemask are vital to limit the spread of the virus.

There is a strict relationship between occupational safety and health and total quality management activities within an organization. They affect the success of each other. Having successfully implementing TQM may result successful OHS vice versa. Loushine at all (2003) have investigated the effect of these on each other in construction. A similar study is reported in EASHW (2002) for food industry. However, these studies mainly focus on risk management aspects of both TQM and OHS. As indicated above, there are some more similarities and philosophies behind these two management approaches. OHS provides several means to ensure the safety of employees within an organization. Basic characteristics of a successful safety program include: management commitment, employee involvement, hazard identification and control, training and education, and some form of program of evaluation (OSHA, 1989) as well as risk management and continuous improvements in these areas. In addition to those there are several other characteristics which would be required for an efficient and effective OHS management. They should include; worksite cleanliness, emergency preparedness, and improved employee selection procedures etc. (Smith et al. 1978)

Rustem, 2005 argues that as in every other management issue, applying TQM principles for OHS would bring continuous improvements in safety processes reducing unsafety and hazardous situations preventing possible accidents. This was even realised by practical implementations (see for example, EASHW, 2000). Based on the above discussion, TQM and OHS should not be considered as two different management systems. They should be considered perhaps under the umbrella of TQM as it could be considered as an overall management systems including every activity (due to the meaning of total) to secure over all business performance. In other words, the TQM s operational sphere integrates aspects of workspace and occupational safety. That means successful safety and health management positively affects productivity.

1.2 Back ground of the organization

Ethiopian Airlines (EAL) is a flag carrier airlines based in Ethiopia, which was founded as international airlines in the year of 1964. It has been operated more than 70 years and a success was on its right by making it the first leading airlines in African continent. EAL is a multi-award-winning airline registering an average growth of 25% in the past seven years. Tewolde Hailemariam Ethiopian Airlines CEO said Ethiopian airlines has marked its 10 million passengers in the year 2018; opened eight new international destinations; received the four

SKYTRAX customer service certification; introduced 14 brand new aircraft and surpassed its 100thaircraft in service. (Selamta Magazine, vol. Nov\Dec 2018).

The 2014 Ebola epidemic threatened havoc in West Africa. Ethiopia, for example, is the headquarters for organizations like the African Union, and Ethiopian Air Lines makes frequent flights to West Africa and many other African countries. According to an Oxford study, Ethiopia was one of the African countries most at risk for developing Ebola outbreaks through animal-to-human transmission (Abby, 2014). "For us, the Ebola effect is stronger than any slowdown in the global economy," Tewolde Gebremariam, CEO of Africa's largest carrier, told Reuters on the sidelines of the CAPA World Aviation Summit. EAL put in place precautions to combat Ebola by implemented the following measures to ensure to the maximum extent the safety of its customers and staff: Frontline staff of Ethiopian both on-ground at airports and on-board were continuously given information on the disease, its mode of transmission and how keep safe; more specifically, staff have been sensitized and trained so that they avoid coming into contact with bodily fluids while doing their work and Stringent and specific surveillance is being carried out regarding all flights from West Africa at Addis Ababa airport. Ethiopian continuously monitored updates from the World Health Organization and other international and national bodies on the disease, its spread and recommended safety measures. The result of the successful prevention measures is that Ebola has never been reported in Ethiopia.

Ethiopian demonstrated remarkable agility in its response to the increased cargo demand in the wake of the pandemic by reconfiguring 25 passenger aircraft into freighters using its own internal MRO capabilities and distributed the much-needed Personal Protective Equipment and medical supplies across the globe.” In its press statement issued on March 26,2021, EAL indicated that on this day last year, it operated its first cargo only service on a passenger aircraft with its Boeing B787-900. “A year since its first operation, Ethiopian has operated 5,645 Cargo flights on the cabin of passenger aircraft and transported more than 121,750 tons of cargo across its vast global network. The flights added an immense value to the total of 33,182 flights and 735,869 tons of cargo transported during the period from March 25, 2020 to March 25, 2021,” the company said https://newbusinessethiopia.com/travel/ethiopian-airlines-operates-33182-cargo-flight-in-one-year/. The decision to rapidly pivot cargo has helped the carrier fight the pandemic during its peak. Ethiopian Airlines has also been busy working on repatriation flights

and became the only airline to continue to fly to China while patient cases increased on the mainland. Since the outbreak, the airline has been a preferred choice for governments to transport passengers back home.

1.3 Problem Statement

J.J Smallwood (1996) on his research on the role of health and safety in project management which concluded that inadequate or the lack of occupational health and safety not only negatively affects the traditional project parameters of cost, quality and schedule, but the sustainability of the environment. According to Oosthuizen (1994): "The Project Manager must be wary not to be trapped in the popular conviction that we are already doing everything possible to reduce risk," and realize the reduction of risk like any other project management function is a perpetual process during the total project life cycle. As health and safety also complements the successful completion of a project which includes completion on schedule, within budget, to quality requirements without damaging the environment and without incurring disease, fatalities or injuries, it is an indispensable project parameter. The Associated General Contractors of America (AGC) (1992) says TQM is a continuous improvement process to meet customer requirements and corporate expectations - a philosophy of doing the right thing the first time, and is the linkage of the processes that deal with health and safety, productivity and quality, the real benefit being the synergy between them. According to Eccles (1994) the methodology of putting health and safety, productivity and quality in place is common: vision; strategy; planning; measurement and involvement of all stakeholders. The Business Roundtable (1991) maintains the principles of achieving management control relative to health and safety, productivity, quality, and even cost and schedule are the same.

Watson-Jones, D. (2020) did research on In-Flight Transmission of SARS-CoV-2 which shows that SARS-CoV-2 test results have been positive for hundreds of flight attendants and pilots. The results demonstrate that SARS-CoV-2 can be transmitted on airplanes. The author suggests in order to prevent transmission of the virus during travel, infection control measures must continue.

As part of the ongoing effort to fighting the pandemic, Ethiopian airlines kindly asked all international and domestic passengers to wear face masks during check-in, boarding, in-flight, deplaning and at the airport, effective 10th May, 2020. Not only does the airline require

passengers and crew members to wear masks, but flight attendants also make sure everyone keeps on their masks, as much as possible, throughout the entire flight. Infants, small children and persons who are unable to remove a face mask without assistance are exempted. Working during this pandemic expose's C/C to many more people over a day or week of work on airplanes and the chaos of boarding and deplaning. There's not much room for social distancing while on flight rather there is high physical proximity.

Recent literature on the use of face covers or masks in COVID-19 situation has suggested its benefits in preventing the transmission of the virus. As per WHO definition, Medical masks are surgical or procedure masks that are flat or pleated (some are like cups); they are affixed to the head with straps. Respiratory viruses that include Coronaviruses target mainly the upper and lower respiratory tracts. Hence protecting the airway from the particulate matter generated by droplets / aerosols prevents human infection. CDC. Novel Coronavirus Disease 2019 (COVID-19): Guidelines on Rational use of Personal Protective Equipment; 2020.

Howard et al. (2020) argue that, wearing a face mask reduces the transmissibility per contact by reducing transmission of infected droplets as witnessed in both laboratory and clinical contexts. They state that the use of face masks could be most effective at stopping spread of the virus when compliance is high among larger populations. The decreased transmissibility could substantially reduce the death toll and possibly, the economic impact from COVID-19.

A face mask should be used correctly to achieve the desired effect. Incorrect usage may increase, instead of decrease, the spread of respiratory infections. If medical masks are worn, appropriate use and disposal is essential to ensure they are effective and to avoid any increase in risk of transmission associated with the incorrect use and disposal of masks. World Health Organization. (2014). Disposing of used masks incorrectly could risk spreading the infection they're designed to protect against the proper use of face mask comprises the correct practice and wearing technique. An assessment on these two aspects can provide pertinent information for the development of health promotion strategies to improve the effectiveness of using face mask. The appropriate use, storage and cleaning or disposal of masks are essential to make them as effective as possible. To get the most out of facemasks, one has to make sure it is worn correctly and at the right time. But the real worry about wearing a mask is that you start to believe it's protecting you

more than it really is. Behavioral economists know that when people begin to feel safe, they take more risks. Tara P Parker (2020)

Facemasks help limit the spread of germs. When someone talks, coughs, or sneezes they may release tiny drops into the air that can infect others. If someone is ill a face masks can reduce the number of germs that the wearer releases and can protect other people from becoming sick. A face mask also protects the wearer's nose and mouth from splashes or sprays of body fluids. Disposable face masks should be used once and then thrown in the trash. You should also remove and replace masks when they become moist. Always follow product instructions on use and storage of the mask, and procedures for how to put on and remove a mask. During an epidemic crisis like covid-19, every possible risk reduction strategy is useful. It is essential to wear the mask correctly. It must fit airtight to the skin, otherwise its effect is lost. Doffing of the mask needs to be properly done as well. The outside of the mask should not be touched.

This research mainly addresses cabin crew working at Ethiopian Airlines. Ethiopian Airlines Cabin Crew have been working through the pandemic specially on repatriation flights bringing passengers back to their loved ones. Even though business is not as usual there are still many commercial flights at the present. The Airline has taken the liberty to train and equip cabin crew with standard prevention tools like face masks, and other PPE. This being said positive cases are still emerging among cabin crew. If this research would have not be conducted and shows the existing gaps, the problem in the area would be left unanswered for a while and it could not be possible to identify the root cause of the spread of covid-19. The findings of this study are also expected to guide them and show proper direction on how they can effectively practice prevention measures effectively. Therefore, this study examined to what extent that the safety practices is conducted by the EAL C/C to keep protected from covid-19 and thereby to recommend a solution and thereby being successful in preserving occupational health safety and satisfying TQM.

1.4 Research Question

In order to achieve the purpose, the researcher wished to answer the following questions:

1. What is the level of knowledge of the cabin crew in Ethiopian Airlines towards the use of protective gears?
2. What is the attitude of Ethiopian Airlines cabin crew towards the use of facemasks?
3. What is the current practice of usage of facemasks by cabin crew in Ethiopian Airlines?

1.5 Research Objectives

1. To assess cabin crew level of knowledge towards face mask.
2. To identify cabin crew attitude towards face mask.
3. To examine the cabin crew practice of using face mask.

1.6 Significance of study

The benefits seen when deciding to go through this research are to show the current practice of cabin crew and improve some areas to be able to fight the virus as much as possible

The reason for doing this research now is because we are still living with the pandemic and rate of infections are rising among cabin crew and the larger public.

The implications of the findings from the research are very important in addressing respective organizations to give a proper guideline on using facemask. The findings of this study are expected to have a contribution that creates awareness on the level of cabin crew knowledge, attitude and practices on the use of facemasks and can thus be used to take remedial actions based on the findings. It could also be used as a baseline to conduct further research on the problem.

Total quality management requires the identification of possible and potential risks. By this, it is expected to create possible preventive action to secure organizational operations. This is also the main concerns of OHS. OHS practices provide scientific and systematic approaches for risk

management. Employing them successfully support the TQM activities and contributes to its success. OHS mainly concerns in reducing employee errors which could be triggered by the environment and working conditions. By changing employee behavior, it may be possible to create more realistic tasking removing unnecessary routines. Successful OHS will lead to higher quality production and more cost-effective management which is one of the basic TQM principles. The study also serve as a starting point towards further studies in the area of quality management practice in project performance. Moreover, the study contribute to the development of the disciple and adds to the project management body of knowledge by providing additional experiences in Ethiopian aviation context.

1.7 Scope of the study

The study delimited itself to occupational health safety practice of Ethiopian airlines cabin crew, which is based in Addis Ababa. The study focused on health belief theory. Even though Ethiopian Airlines has many other departments working in direct contact with passengers like ticket office, baggage handling and station agents: due to convenience and accessibility constraints, scope of the study is only limited to cabin crew who are currently active and flying. The time scope for this project has been focused from December 2020 to March 2021.

1.8 Limitation of the study

There are some limitations while conducting this research. One of the limitations being the lack of sufficient similar studies previously conducted. Another limitation is the participants of the study being on duty while conducting the survey and being in a rush of feeling fatigued to fill out the survey. The other limitation is the occurrence of bias as the study design is cross-sectional and took information at the specified time points and cause and effect association cannot be studied.

1.9 Definition of terms

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as defined by WHO.

Knowledge is defined by collins dictionary as the information and understanding about a subject which a person has.

Attitude is a feeling or opinion about something or someone as the Cambridge dictionary defines it.

Practice is defined as a habitual or customary performance at dictionary.com

Surgical facemask according to Wikipedia's definition is a personal protective equipment that prevents airborne transmission of infections by blocking the transmission of pathogens (primarily bacteria and viruses) shed in respiratory droplets and aerosols into and from the wearer's mouth and nose.

1.10 Organization of the study

The research paper will be organized into five chapters: Chapter one deals with the introduction part of the paper and second chapter for the review of related literatures about the subject matter followed by chapter three that deals with research methodology used in the research. Chapter four result and discussion. At the end, in chapter five of the document covers conclusions and recommendations of the research

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This section covered review of literature from different scholars and authors that have been examined in the area of project risk management with special focus on occupational health safety, health behavioral theories and total quality management. The theoretical and practical findings of various studies related to occupational health safety, total quality management in project management process, and behavioral competencies were described. A reviewed literature from secondary sources such as published books, articles and related websites also be presented to reveal points, targeting at the attainment of the research objectives

2.1 Theoretical review

2.1.1 Occupational safety and health

As defined by the World Health Organization (WHO) "occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards." Health has been defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Occupational health is a multidisciplinary field of healthcare concerned with enabling an individual to undertake their occupation, in the way that causes least harm to their health. It aligns with the promotion of health and safety at work, which is concerned with preventing harm from hazards in the workplace. Ethiopia has ratified about 20 ILO conventions, including core conventions such as -Occupational Safety and Health Convention, 1981 (No. 155). (MOLSA,2006) These conventions are the basis for developing laws in the area of workplace protection. Ethiopia has had a regulation on Occupational Safety and Health (OSH) since the 1940's.

OSH management has become a very complex multi-functional science within operations management and total quality management (TQM). It focuses on a non-legalistic approach whereby the organizational culture fosters spontaneous OSH and a high quality of work life. This is done by using a TQM approach, based on a functional TQM model.

There is a strict relationship between OHS and TQM activities within an organization. They affect the success of each other. Having successfully implementing TQM may result successful OHS vice versa. Loushine at all (2003) have investigated the effect of these on each other in construction. A similar study is reported in EASHW (2002) for food industry. However, these studies mainly focus on risk management aspects of both TQM and OHS. As indicated above, there are some more similarities and philosophies behind these two management approaches. OHS provides several means to ensure the safety of employees within an organization. Basic characteristics of a successful safety program include: management commitment, employee involvement, hazard identification and control, training and education, and some form of program of evaluation (OSHA, 1989) as well as risk management and continuous improvements in these areas. In addition to those there are several other characteristics which would be required for an efficient and effective OHS management. They should include; worksite cleanliness, emergency preparedness, and improved employee selection procedures etc. (Smith et al. 1978). Improving occupational safety through quality management techniques, such as total quality management, has been shown to significantly reduce injuries (Chase 1998, Courtice and Herrero 1991, Herrero et al. 2002). This is because the basic premise of quality management is identification and correction of variance (or unwanted outcomes) in a process. For safety, variance is in the form of workplace hazards, unsafe behavior, and accidents caused by human error. The similarities between safety and quality management are evident by the shared characteristics of each system's design (Curado and Dias 1996, Sommerkamp 1994). The U.S. Occupational Safety and Health Administration (OSHA 1996) indicates that the elements of a successful safety management program consist of: management commitment, employee involvement, hazard identification and control, training, and accident investigation. On the other hand, Dean and Bowen (1994) and Hackman and Wageman (1995) identified customer satisfaction, team work, continuous improvement, training and education, employee empowerment, and organizational culture as key to a successful quality management system.

2.1.2 The Concept of Total Quality Management

From this study by Abdalla on the "Role of Total Quality Management in Setting Occupational Safety and Health Management System in Small and Medium

Size Organizations" it concluded that: Total quality management (TQM) has direct influence on occupational safety and health when it explicitly focuses quality improvement effort on safety &health. Improving work processes through using processes improvement techniques well reduce occupational exposure.

Total quality management requires that the principles of quality management are applied in all aspects at every level in an organization. It encompasses entire organization from suppliers to customers' stresses a commitment by management to have a continuing companywide drive towards excellence in all aspects of products and services those are important to the customer. TQM in service sector is different from manufacturing because service quality is more difficult to measure than quality of products, and Service quality perception depends on Intangible differences between products and Intangible expectations that customers have on products (Gemechis, 2012).

According to Hackman and Wageman (1995) and Beer (2003), implicit in the TQM philosophy are values of teamwork and collaboration in the pursuit of quality and continuous improvement. It appears evident that working with supportive co-workers who readily share task-relevant information and expertise is more likely to be associated with successful TQM implementation. That is, for firms implementing TQM practices, higher co-worker support is likely to be associated with enhanced organizational performance. Referring to the TQM literature, some studies have highlighted the importance of co-worker support without empirically testing their assertions (e.g. Montes et al., 2003). Perceived organization support refers to employees' perception of being valued and cared about by their organization (Eisenberger et al., 1986). This concept is theoretically based on reciprocity in the social exchange relationship. In situations of perceived support, employees' trust that their increased effort toward reaching organization goals will be noticed and rewarded (Allen and Brady, 1997; Eisenbergeret al., 1986)

Summers (2006) argues that TQM practices can lead to the improvement of the quality of products, make better use of resources, lower costs, minimize errors, and reduced delays in production and delivery time schedules which all subsequently enable an organization to acquire greater market share and boost performance. This view is supported by Kumar et al. (2009) who found from their study of TQM and performance that TQM practices significantly improved

employee participation and morale, increased efficiency in operating procedures, reduced the level of customer complaints, and ultimately enhanced profitability. Sinkovics & Roath (2004) argue that TQM practices help to direct performance by influencing the way in which routine business operations are carried out and by providing a foundation for longer term business success and overcome different kinds of challenges.

2.1.3 Project Implementation

A standard project typically has the following five phases: initiating, planning, executing, monitoring, and closing. initiation, planning, implementation, and closure. Taken together, these phases represent the path a project takes from the beginning to its end and are generally referred to as the project "life cycle."

Project implementation (or project execution) is the phase where visions and plans become reality. This is the logical conclusion, after evaluating, deciding, visioning, planning, applying for funds and finding the financial resources of a project. Executing also refers to implementing the project plan, since without a plan there is no control, Heagney,2012. Executing means carrying out the activities described in the work plan, and where visions and plans become reality,Dillon,2008.Project planning tools will help in overseeing the many steps involved and making sure that each is happening on time and within budget. The project lead should also be monitoring the quality of outputs from each task to make sure there are no weak links in the final product. Projects rarely proceed precisely according to plan. The implementation phase needs to be adaptable and responsive so that project planners can respond to any unforeseen events without losing forward momentum. Cost overruns are not uncommon, so be prepared to request additional funding should it become necessary.

It is important to take into account that independently of the nature of the project, implementation takes time, usually more than it is planned, and that many external constraints can appear, which should be considered when initiating the implementation step (i.e. seasonality in availability of community engagement/resources) (NETSSAF 2008).

The objectives of the implementation phase can be summarized as putting the action plan into operation (PHILIP et al. 2008). This involves coordinating people and resources, as well as

integrating and performing the activities of the project in accordance with the project plan. Although the work of execution is undertaken according to26the script represented by the project plan, evolving circumstances imply that the27assumptions underpinning the initial script tend to become less relevant and realistic28over time. This, in turn, implies that project execution tends to continuously "drift away" from the baseline adopted at the end of planning. At the same time, because the project is being undertaken as an investment, the underlying objective relates to the success of that investment. Project execution involves a control cycle directed at ensuring that the project and its baseline documents are always aligned. Project execution control looks at gaps between the values of parameters set down in the plan and their current actual values. Using this information, actions are considered which might close these gaps. Project baseline revision attempts to deal with the situation in which it has become clear that no effective actions are available to close the gaps revealed in project execution control. Because all significant gaps of this kind must be closed, the only possible strategy involves revising the intended values of these parameters. The execution phase of the project is most dangerous and the most drain on the resources during project life cycle, therefore, its need to monitor and control by specialists to exceeded obstructions and achieve the project goals.

2.1.4 History of On-board transmissions of airborne diseases of the respiratory tract

There has been different cases of significant outbreaks of contagious diseases and related risk of transmission of these infectious diseases aboard civil aircrafts. Influenza is one of the most vulnerable diseases to be transmitted via air transport. Civil aviation played a major role during 2009 pandemic of A/H1N1 influenza (Hwang, 2012). The risk of being infected aboard an aircraft, according to studies, is noticeable when sitting not further than 2 rows apart from the index case (Baker et.al, 2010). Another problem is the possible transmission of acute respiratory diseases caused by coronaviruses: SARS and MERS (Middle East Respiratory Syndrome). All significant in-flight transmissions of SARS were reported during 2002-2003 outbreak, when the epidemic began in China and was quickly spread out by means of air transport to such distant countries as Canada, France, the USA and Germany (Schenkel et.al, 2017). No cases of onboard transmissions have been reported since then. In turn, MERS can

be emerging problem in not so distant future. The virus, discovered in 2012, began an epidemic in Saudi Arabia that year. All cases of the disease described outside the Middle East in 26 countries were linked to the air transport, with he biggest outbreak in South Korea. Another disease that can be easily transmitted on board is measles. In countries of high rates of measles immunization, imported cases of the disease from countries with rate of vaccine immunization lower than 90% is a serious source of measles outbreaks (Edelson et.al, 2011).

2.1.5 Covid-19

The National Cancer Institute defines Covid-19 as a highly contagious respiratory disease caused by the Severe acute respiratory syndrome coronavirus 2, shortened to SARS-CoV-2. SARS-CoV-2 is thought to spread from person to person through droplets released when an infected person coughs, sneezes, or talks. It may also be spread by touching a surface with the virus on it and then touching one's mouth, nose, or eyes, but this is less common. The most common signs and symptoms of COVID-19 are fever, cough, and trouble breathing. Fatigue, muscle pain, chills, headache, sore throat, runny nose, nausea or vomiting, diarrhea, and a loss of taste or smell may also occur. The signs and symptoms may be mild or severe and usually appear 2 to 14 days after exposure to the SARS-CoV-2 virus. Some people may not have any symptoms but are still able to spread the virus. Most people with COVID-19 recover without needing special treatment. But other people are at higher risk of serious illness. Those at higher risk include older adults and people with serious medical problems, such as heart, lung, or kidney disease, diabetes, cancer, or a weak immune system. Serious illness may include life-threatening pneumonia and organ failure. Research is being done to treat COVID-19 and to prevent infection with SARS-CoV-2. Also called coronavirus disease 19 (NCI,2020).

2.1.6 Effect of Covid-19 in the Aviation industry

COVID-19 has now spread worldwide affecting the economy and different industries. When the crisis hit air transport, the whole aviation industry was affected. The fear of passengers following the COVID-19 crisis, travel restrictions and the ensuing economic crisis have resulted in a noticeable drop in demand for airline services. The drop in demand for passenger air transport

due to the COVID-19 pandemic is threatening the survival of many firms in the aviation industry, with many jobs in jeopardy.

The International Air Transport Association (IATA) estimated the airline cost as much as $252 billion with approximate 44% drop in lost passenger revenues due to the collapse of the airline industry on 24 March 2020. IATA has released an updated analysis on 14April 2020 showing that the COVID-19 crisis will see airline passenger revenues drop by $314 billion in 2020, a 55% decline compared to 2019. IATA's impact analysis of Covid-19 on aviation shows that up to 4.8 million jobs in aviation may be lost by the beginning of next year, a 43% reduction from pre-COVID levels. When you expand those effects across all the jobs aviation would normally support, 46 million jobs are at risk. These include highly-skilled aviation roles, the wider tourism jobs impacted by the lack of air travel and employment throughout the supply chain in construction, catering supplies, professional services and all the other things required to run a global transport system (IATA,2020).

2.1.7 Measures taken by Ethiopian Airlines to fight Covid-19

Ethiopia recorded its first case of Covid-19 in mid-March. Alarm bells were immediately sounded because of the country's ominous circumstances: a population of 110 million and an overcrowded capital city of Addis Ababa. What makes matters more complicated is that Addis Ababa's Bole International Airport is one the busiest hubs on the continent and a major gateway into Africa for millions of international travelers (Mimi Alemayehou,2020)

Ethiopian Airlines has stated on its website that the safety, security and good health of its passengers and employees is of highest priority. Thus, in an attempt to fight COVID-19 transmission by minimizing physical interaction and keeping social distances, Ethiopian has temporarily closed all its ticket offices in Ethiopia effective 30 March 2020 and made all the necessary preparations to deliver services via Ethiopian Mobile App, Website, Chabot, E-mail, Social Media and Contact Center with enhanced flexibility, choice and value.

The multi-channel platforms enable customers book and pay as well as request for change on existing booking 24/7. Furthermore, more than 12 payment options are available including Banks and mobile money platforms.

Unless there is a travel restriction imposed on your travel itinerary by Ethiopian or countries you are planning to travel to/from, Ethiopian continues its operation and keeps its passengers notified for any travel readjustments. If your trip has been impacted by coronavirus, it is easy to cancel or change your flights. Cleaning and disinfection of different part of the aircraft is done after every flight to provide a safe and sanitary operating environment for passengers and crew.

2.1.8 Face mask

Wuhan, Hebei city is the first to make mask wearing mandatory in 2020. This was one of the measures taken as a prevention measure to the rapid spreading of the COVID-virus from human to human. Now that COVID-19 has affected many countries around the world, the need for masks have surpassed the supply and people have sorted to using several types of facemasks to protect them from contracting COVID-19. These includes; basic cloth facemask, surgical facemask, KN95 Respirator, Full length Face shield, Self-contaminated breathing Apparatus, P100 Respirator/Gas mask, Filtering Facepiece Respirator and N95 respirator.
Refusing to wear a mask could lead to penalties in many countries

2.1.9 Effectiveness of Face mask in fighting Covid-19

To effectively prevent and protect from respiratory diseases such as covid-19, wearing a face mask in the correct way is an important issue Masks are more efficient if they fit properly and are worn correctly over the nose and mouth. More effective in combination with frequent and thorough hand washing with soap and water or use of hand sanitizer. When evaluating the current practice of the public during this pandemic, it is seen that many do not use masks correctly. Touching the front of the mask, touching the face and other surfaces without washing the hands after removing the mask, and using disposable masks repeatedly are some of the incorrect practices seen among the public. Many bacteria, viruses, and fungi accumulate on the outer surface, especially the inner side of the mask. Therefore, incorrect use increases the risk of

contamination to both the mask wearer and those around. The improper use of masks is as good as the use of improper mask which is ineffective.

According to the flight risk levels, staff working on different posts should follow respective personal protection standards. The mask should be close to the face, covering the nose and mouth completely. When the mask is on or being removed, the crew must not touch the out layer of the mask with hands to avoid hands contamination. Once dampened by secretions or contaminated by other contaminants, facial masks must be replaced immediately with new ones, and hands should be cleaned with sanitizer both before and after the replacement. Flight crew members should wear masks while in the cockpit and crew rest area. Crewmembers flying high-risk flights should change their masks at least once every 4 hours (or whenever necessary). All disposable protective equipment, after their use, should be placed in yellow medical waste bags. When we talk about the effectiveness of facemasks, we are talking about the ability of the mask to protect the wearer from infectious particles.

2.1.10 Benefits of Face mask

Gandhi and Marr (2020) have issued clarifications regarding the benefits of masks and their efficacy, they asserted that masks play an important role in protecting not only people around the wearer, but also the wearer themselves. Gandhi and Marr explained that the individual, tightly packed fibers of the material force air flow to curve around them, much like an obstacle course. However, the aerosols cannot bend sharply like the air and end up either slamming against the fiber or coming too close to the fiber and sticking to it.

The WHO recommends the prevention of human-to-human transmission by avoiding close contacts and avoid going to crowded places. But cabin crew are working in close proximity with passengers in an aircraft cabin and this demands the use of all preventive measures seriously. One of the prevention measures discussed in this study is the proper use of face masks to the protection of both the crew and passengers by reducing the transmission risk of infectious respiratory droplets in between individuals by cough or sneeze.

2.1.11 Theory of planned behavior

The theory of planned behavior was proposed by Icek Ajzen (1985). The theory of planned behavior suggests that people are much more likely to intend to enact certain behaviors when they feel that they can enact them successfully. Increased perceived behavioral control is a mix of two dimensions: self-efficacy and controllability. Self-efficacy refers to the level of difficulty that is required to perform the behavior, or one's belief in their own ability to succeed in performing the behavior. Controllability refers to the outside factors, and one's belief that they personally have control over the performance of the behavior, or if it is controlled by externally, uncontrollable factors. If a person has high perceived behavioral control, then they have an increased confidence that they are capable of performing the specific behavior successfully.

The theory of planned behavior specifies the nature of relationships between beliefs and attitudes. According to these models, people's evaluations of, or attitudes toward behavior are determined by their accessible beliefs about the behavior, where a belief is defined as the subjective probability that the behavior will produce a certain outcome. Specifically, the evaluation of each outcome contributes to the attitude in direct proportion to the person's subjective possibility that the behavior produces the outcome in question (Azjen, 1975).
Human behavior is guided by three kinds of considerations: behavioral beliefs, normative beliefs, and control beliefs. In their respective aggregates, behavioral beliefs produce a favorable or unfavorable attitude toward the behavior, normative beliefs result in a subjective norm, and control beliefs pertain to perceived behavioral control.

In combination, the attitude toward the behavior, the subjective norm, and the perceived behavioral control lead to the formation of a behavioral intention (Azjen , 2002). In particular, perceived behavioral control is presumed not only to affect actual behavior directly, but also to affect it indirectly through behavioral intention (Noar et.al, 2005). As a general rule, when (a) the individual has a favorable attitude toward a behavior, (b) the attitude is aligned with the relevant norms, and (c) the individual perceives that s/he has a high level of behavioral control, a strong intention to perform the behavior in question is expected (Godin, 2006). Finally, given a

sufficient degree of actual control over the behavior, the individual is expected to carry out his or her intentions when the opportunity arises (Azjen , 2002).

2.1.12 Health Belief Model

The health belief model (Becker, 1974; Hochbaum, 1958; Janz & Becker, 1984; Kirsch, 1974; Rosenstock, 1960 as cited in Glanz et al., 2002) is one of the oldest theories seeking to explain human health behavior.

According to this model, your individual beliefs about health and health conditions play a role in determining your health-related behaviors. The following constructs of the HBM are proposed to vary between individuals and predict engagement in health-related behaviors

2.1.12.1 Perceived susceptibility

Perceived susceptibility refers to subjective assessment of risk of developing a health problem Marshall H (1984). The HBM predicts that individuals who perceive that they are susceptible to covid-19 will engage in behaviors to reduce their risk of developing the health problem like wearing face mask. Individuals with low perceived susceptibility may deny that they are at risk for catching covid-19. Others may acknowledge the possibility that they could develop the illness, but believe it is unlikely. Individuals who believe they are at low risk of developing the illness are more likely to ignore mask wearing policies. Individuals who perceive a high risk that they will be personally affected by covid-19 are more likely to wear face mask to decrease their risk of infection.

2.1.12.2 Perceived severity

Perceived severity refers to the subjective assessment of the severity of a health problem and its potential consequences Marshall H (1984). The HBM proposes that individuals who perceive a given health problem as serious are more likely to engage in behaviors to prevent the health problem from occurring (or reduce its severity). News and rumors about the pandemic spread rapidly through online social media, generating a great deal of Perceived seriousness. It created different beliefs on how it is life-threatening and painful. On the other hand, an individual may

perceive that covid-19 is not medically serious, which makes one indifferent and affects how the individual uses preventive measures.

2.1.12.3 Perceived benefits

Health-related behaviors are also influenced by the perceived benefits of taking action. Perceived benefits refer to an individual's assessment of the value or efficacy of engaging in a health-promoting behavior to decrease risk of disease Marshall H (1984). If an individual believes that a particular action will reduce susceptibility to a health problem or decrease its seriousness, then he or she is likely to engage in that behavior regardless of objective facts regarding the effectiveness of the action. For example, individuals who believe that wearing face mask prevents covid-19 infection are more likely to wear facemask than individuals who believe that wearing facemask will not prevent the infection of covid-19.

2.1.12.4 Perceived barriers

Health-related behaviors are also a function of perceived barriers to taking action. Perceived barriers refer to an individual's assessment of the obstacles to behavior change Barbara K (2008). Even if an individual perceives the pandemic as threatening and believes that a particular action will effectively reduce the threat, barriers may prevent engagement in the health-promoting behavior. In other words, the perceived benefits must outweigh the perceived barriers in order for behavior change to occur. Perceived barriers to using face masks can include poor fit, ear pain, removal of cosmetics, humidity, and difficulty breathing.

2.2 Empirical Literature Review

Similar researches have been carried out on the use of face mask during COVID-19 pandemic. In this part of the literature review, some previous studies are discussed.

The empirical investigation of the nature and correlates of anti- mask attitudes during the COVID-19 pandemic by (S Taylor,2020) surveyed 2,078 adults from the US and Canada. Consistent with other surveys, Taylor found that most (84%) people wore masks because of COVID-19. The 16% who did not wear masks scored higher on most measures of negative

attitudes towards masks. Network analyses indicated that negative attitudes about masks formed an inter correlated network, with the central nodes in the network being (a) beliefs that masks are ineffective in preventing COVID-19, and (b) psychological reactance (PR; i.e., an aversion to being forced to wear mask s). These central nodes served as links, connecting the network of anti-masks attitudes to negative attitudes toward SARSCoV2 vaccination, beliefs that the threat of COVID-19 has been exaggerated, disregards for social distancing, and political conservatism. Findings regarding PR are important because, theoretically, PR is likely to strengthen other anti-masks attitudes (e.g., beliefs that masks are ineffective) because people with strong PR react with anger and counter-arguments when their beliefs are challenged, thereby leading to a s strengthening of their anti-mask beliefs. Implications for improving mask adherence are discussed.

The study conducted at Dharan, Nepal by Alam et.al (2020) on the General public's knowledge and practices on face mask use during the COVID-19 pandemic found that the general public in Dharan possessed a high knowledge on face mask as demonstrated by correct response to most questions by over 90% of study respondents. However, the practice of face mask use was low and influenced by education, literacy and age. The research documents that knowledge scores are not associated with face mask use behaviors.

Machida et al. (2020) set out to determine the prevalence of wearing masks to prevent COVID-19 and compliance with appropriate measures for the correct use of face masks among the general public in Japan where wearing medical masks is a "cultural" normality This cross-sectional study was based on an internet-based survey completed by 2141 people (50.8% men, aged 20–79 years) who were selected among registrants of an Internet research company between 1 April and 6 April 2020. Participants were asked to indicate how often they wore masks for prevention and to what extent they practiced appropriate measures suggested by the World Health Organization. The prevalence of wearing masks was 80.9% and compliance rates with appropriate measures ranged from 38.3% to 83.5%. Only 23.1% complied with all recommendations. Compliance rates were overall low in men and persons with low household incomes. The results, hence show that many citizens implement inaccurate measures when using

face masks. Therefore, providing guidance on correct usage is essential when encouraging the use of face masks to prevent COVID-19.

Study conducted in Saudi Arabia on the Community practice of using face masks for the prevention of covid-19 by (Yaser A et.al, 2020) found that the wearing of face masks to be significantly associated with factors related to age, gender, region, education, and employment. In fact, younger age groups (16–34 years old), males, expatriates, advanced education, and employed and students showed a greater compliance than other groups.

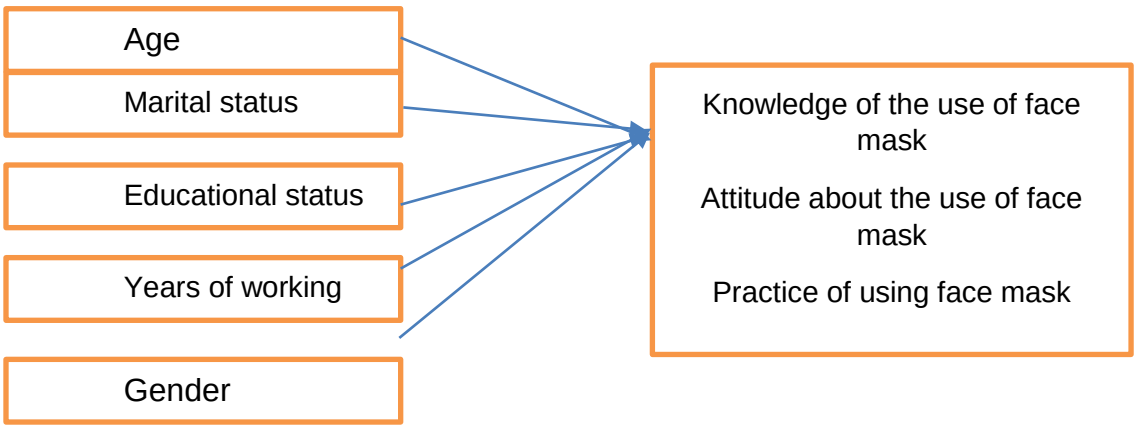
Kumar et.al (2020) did a research on Knowledge, attitude, and practice of HCWs regarding the use of face masks, the study revealed that Knowledge, attitude, and practice of HCWs were found to be inadequate. Studied HCWs had a positive attitude but moderate-to-poor level of knowledge and practice regarding the use of face mask.

A study conducted by (Tadesse 2020) on Healthcare Worker's Knowledge, Attitude, and Practice of Proper Face Mask Utilization, and Associated Factors in Police Health Facilities of Addis Ababa, Ethiopia showed the level of knowledge and attitude towards face mask utilization was relatively low, and the level of proper face mask utilization was quite low in comparison with some studies.

All of the above studies show the need to work on compliance of proper usage of masks to increase their efficiency. Even when knowledge of face mask use was high there were other factors that affected the practice. Attitude towards face mask use is another factor that needs an emphasis when thinking of improving the practice of using face masks.

2.3 Conceptual framework

A conceptual framework lays the foundation of a study and enables the researcher to discover what is known or not known about a topic of interest in order to conduct research that adds to the body of knowledge (Polit & Beck 2006:88). This study is set to assess the knowledge, attitude and practice of face mask by C/C in EAL.



Independent Variable Dependent Variable

Figure 1 Conceptual framework

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter outlines and explains the methodology employed to achieve the research objective and test the research hypothesis formulated in the study. It starts by explaining the research objective then goes through research approach, research design, data collection method, sampling design which embraces of target population, sampling frame and location, sampling elements, sampling technique and sampling size, data collection method, variables and measurement, data analysis technique, data processing and pilot test

3.1 Research approach and design

This study adopted a quantitative cross-sectional descriptive design, which supported the researchers in assessing and describing the performance of the participants at a specific time point (i.e., during a pandemic state) rather than over a period. The research study is designed in survey, where the survey is used to quantify the data. A cross-sectional descriptive design was employed since it observational in nature. This type of research can be used to describe characteristics that exist in a community. The cross-sectional study was conducted between December 2020 and March 2021. A self-administered questionnaire is used to obtain information from the flight attendants, the questionnaire is adopted from different studies after getting consent from the study participants. The self-administered questionnaire contains the following four sections: basic demographic characteristics (age, gender, educational status, years of work experience and marital status), knowledge, attitude and practice regarding the use of proper face mask utilization. Data is analyzed using SPSS version 23. Frequency, percent, mean and standard deviation of given data for each variable will be calculated.

3.2 Description of the study variables

Variables are the conditions or characteristics that the researcher manipulates, or observes. The independent variables are the conditions or characteristics that the researcher manipulates or controls in his or her attempt to ascertain their relationship to observed phenomena. Whereas the dependent variables are the conditions or characteristics that appear, disappear or change as the experimenter introduces, removes or changes independent variables (Best, 2003:162-163).

Dependent Variables

Knowledge, Attitude and Practice of use of face masks

Independent Variables

Socio-demographic characteristics

- Age
- Marital status
- Educational status
- Years of working experience
- Gender

3.3 Sampling Design

The sampling technique that applied in this research study is non-probability sampling technique because it is difficult to draw random probability sampling due to time or cost considerations.

In this research study, the type of non-probability sampling technique that was used is convenience sampling because of its speed, cost-effectiveness, and ease of availability of the sample. Convenience sampling technique was applied to select the respondents on randomly selected flights. These means that a single flight consist of different type of cabin crew with different years of experience and status therefore it can be representative of C/C in EAL. And since this study is about C/C of EAL, then this type of method fits the study very well. With this, the researcher could get enough time with the crew to deliver the questionnaire while they are

settled down and can give full attention to the survey. Here, the researcher hand delivers the questionnaire to the operating cabin crew onboard their flight to those willing to fill the survey during their journey while they had plenty of time to do it. Acquiring the targeted respondents was convenient and the questionnaire were distributed based on willingness basis. The sample population is too dispersed to examine and consider the entire population.

3.3.1 Source population

The source population is cabin crew professionals who are working at Ethiopian Airlines. In Ethiopian airlines, around 3,621 flight attendants are currently employed. The study population for this study was cabin crew who are working at Ethiopian Airlines

3.4 Population of the study and sampling

A good sample size is important consideration in research as it influences the precision of our estimates and the power of the study to draw conclusions. A 95% confidence level and level of precision of 0.05

$n= N/1 + Ne^2$

Where: n= sample size

N= population size

e = Error of 10 %Sample size

n = 3621/ 1 + (3621$*$ (0.05^2))

Sample size

n= 360 cabin crew

3.4.1 Sampling Elements

For this research, the unit of analysis of the research was restricted to operational cabin crew who are currently flying on the skies

Inclusion Criteria

All cabin crew, who are currently working in Ethiopian Airlines as an active flying crew who are willing to give informed consent and who are available at the time of the study .

Exclusion Criteria

Cabin crew inaccessible during data collection; sick and leave.

3.5 Instrument of data collection

In this research, self-administered questionnaire survey method was used to obtain primary data. The survey was conducted during flights to cabin crew on board and on ground to stand by crew in the briefing room. Self-administered questionnaires, are a cost-efficient way to quickly collect information from a large number of people in a relatively short period of time. The questionnaire was developed by reviewing previous different literature on the proper use of surgical face mask and the guidelines of the Centre for Health Protection WHO and in consultation with experts to check the relevance and make necessary changes according to the study requirements.

The questionnaire consisted of 4 parts. The first part included information about the demographic characteristics, the second part about the knowledge of cabin crew regarding the use of surgical face mask to prevent the new COVID-19 spreading and the third and fourth part about the practices and the attitude of them regarding the use of surgical face mask to limit the new COVID-19 exposure. A pilot test was conducted of 30 samples among Ethiopian Airlines employees to investigate validity and reliability of the questionnaires before they were distributed to public

3.6 Method of data collection

The questionnaire was developed by reviewing previous different literature on the proper use of surgical face mask and the guidelines of the Centre for Health Protection WHO and the CDC and in consultation with experts from different fields to check the relevance and make necessary changes according to the study requirements. The questions were modified according to the suggestions received from the experts and output from the pilot test.

The self-administered questionnaire developed by the researcher contained the following 4 sections:1 basic demographic characteristics (age, gender, educational status, marital status and years of work experience), and 2 knowledge, 3 attitude, and 4 practices regarding the use of

proper face mask utilization. The data were collected through a self-administered method by the researcher.

3.7 Data analysis method

The collected data was compiled and coded to have the required accuracy and quality. In order to analyze the raw quantitative data collected, the researcher used Statistical Package for Social Sciences (SPSS) version 23.00 software which helps to make descriptive analysis of the gathered data to present quantitatively using frequency, percentage, mean, standard deviation and proportions along with charts and tables to present the results and describe the findings. Multiple linear regression was used to examine the relation between the demographic characteristics and variables. A Pearson correlation analysis was used to compare correlations between variables.

3.7.1 Validity and Reliability of the Instrument

For research data in order to be of value and of use requires validity and reliability measurements. Both are fundamental bases of scientific method of research. For a research to be reliable, it also needs to be valid.

Validity

According to Kothari (2004), validity refers to the extent to which a test measure what we actually wish to measure. It is about finding out if the data collected is relevant to the problem being investigated. The validity of the research considered while developing close-ended questionnaires and checked by benchmarking the related literature review and questionnaires in order to generate a valid response. The instrument of data collection validity is checked by asking others peoples who have made researches in the same area and those who have know-how on the studied area for feedback and asked my advisor for approval before conducting collection

Reliability

Reliability refers the degree to which the results of the research are repeatable (Walliman, 2006). It is about absence of difference in the research findings if the research were repeated. In order to confirm the applied researcher approach is consistent or not, the research has been supported by using reliable sources of information such as related journals, articles, books, websites, and work papers and studies related to the studied area.

The Likert scale questionnaire items reliability was checked by the application of the Cronbach Coefficient Alpha using SPSS software for the computations of internal consistency. As a rule of thumb, researchers consider a measure to have adequate reliability if Cronbach's alpha coefficient exceeds 0.7 (Leary, 2012).

The Cronbach alpha value for the pilot test under Part 3 and part 4 of the questionnaire, which focuses in identifying the attitudes of the cabin crew towards the use of face mask and the practice of cabin crew while using face mask respectively, is calculated as 0.722 and 0.885. This indicates that there is a high internal consistency among the data.

Table 1: Case Processing Summary and Reliability Statistics for Pilot-Test for identification of the attitudes of cabin crew towards the use of face mask.

Case Processing Summary			
		N	%
Cases	Valid	30	100
	Excluded	0	0
	Total	30	100
a. Listwise deletion based on all variables in the procedure			
Reliability Statistics			
Cronbach's Alpha		N of Items	
0.722		6	

Source: own survey, 2021

Table 2: Case Processing Summary and Reliability Statistics for Pilot-Test for identification of the practice of cabin crew on the use of face mask.

Case Processing Summary			
		N	%
Cases	Valid	30	100
	Excluded	0	0
	Total	30	100
a. Listwise deletion based on all variables in the procedure			
Reliability Statistics			
Cronbach's Alpha		N of Items	
0.885		10	

Source: own survey, 2021

3.8 Ethical considerations

The research work has included ethical considerations while carrying out the work. Cabin crew who participated in the study had the right to determine whether or not they wanted to participate; it was a voluntary basis. The participants were informed about the purpose of the study. The information given by the participants are kept confidential with their rights and privacy observed. Individual respondents are never identified in reporting findings, summaries are kept anonymous. In due respect of participants' privacy, and avoid personal intrusion, the questionnaires were designed not to ask for telephone, email or name of the participants.

CHAPTER FOUR

RESULT AND DISCUSSION

As analysis of a research is mainly done to find an answer to the research question raised and to discuss the objective stated in previous sections. The objectives of this study being the assessment of the knowledge, attitude and practice of proper use of face mask. This chapter presents the findings and results from the data collected through close ended questionnaire which is analyzed using SPSS statistics version 23.0 in order to assess the use of facemasks by Ethiopian Airlines cabin crew and to provide adequate recommendations for the identified gaps. It presents descriptive analysis on variables of the study which are knowledge, attitude, practice and demographic characteristics. Multilinear regression is used to explain the relationship between one nominal dependent variable and the independent variables.

4.1 Results

This study had a sample size of 360 respondents and out of the 370 questionnaires distributed, 358 valid responses were obtained. This represents a 99.44% response rate.

Section I

4.1.1. Respondents' Demographic Results

This section describes the respondents‟ profile which consists of gender, age, occupation, Marital status, years of work experience and education status. The 358 complete and valid questionnaires were used for the quantitative analysis.

Table 3: Demographic Characteristics of the study variables

Variables		Frequency (%)
Gender	Male Female	15(4.2) 343(95.8)
Age	20-29 30-39 40-49 Above 50	268(74.9) 59(16.5) 24(6.7) 7(2.0)
Marital status	Married Single Divorced	91(254) 262(73.2) 5(1.4)
Years of experience	0-5 6-10 11-15 16-20 221-25	270(75.4) 53(14.8) 25(7.0) 6(1.7) 4(1.1)
Educational status	High school graduate Diploma Degree Master's degree & more	123(34.4) 75(20.9) 146(40.8) 14(3.9)

Source: own survey, 2021

According to the findings 95.8% of the respondents indicated that they were females while indicated 4.2% that they were males. This shows that majority of cabin crew respondents were female. According to the age variable, the highest percentage 74.9% of cabin crew respondents is between 20-29 years old while age between 30-39 takes the second level with 16.5% and cabin crew with age between 40-49 make 6.7% and cabin crew with age above 50 represent 2%. According to the Marital status variable, majority of the respondents which are 73.2% are single, 25.4% are married and 1.4% are divorced. According to the work experience variable, majority of the respondents which are 75.4% have 0-5 years work experience, 14.8% have 6-10 years of experience, 7% have 11-15 years of experience, 1.7% have16-20 years of experience and 1.1% have 21-25 years of experience. From the education variable majority of the respondent which

are 40.8% have a degree, 34.4% are high school graduate, 20.9% have diploma and 3.9% have a master's degree and above.

4.1.2 Knowledge of Ethiopian cabin crew regarding the use of Face masks

For the convenience of analyses, each correct response in the knowledge category was scored 1, and each incorrect response was scored 0. The final score was calculated and then labeled based on score (out of 7). The correct response of >5 out of 7 questions (>80%) was considered as good knowledge and ≤5 (≤80%) was considered as poor knowledge. The respondents of this study had overall good knowledge regarding face mask use against COVID-19 infection which was 91.37%.

Table 4: Knowledge of Ethiopian cabin crew about the use of face masks

Variables	Response n (%)	
	Correct Answer	Wrong Answer
1. Which is the correct way of using surgical face mask to protect against COVID-19?	351(98)	7(2)
2. How many layers are there in a surgical mask?	286(79.9)	72(20.1)
3. Can wearing a surgical mask protect you from COVID-19?	338(94.4)	20(5.6)
4. Which layer acts as a filter media barrier?	246(68.7)	112(31.3)
5. Are you confident enough to know the correct steps of wearing a face mask?	358(100)	----
6. For proper wearing, to which extent the surgical mask should cover?	354(98.9)	4(1.1)
7. What is the purpose of the metal strip on the surgical mask?	357(99.7)	1(0.3)

Source: Own survey, 2021

All (358) respondents are confident enough to know the correct steps of wearing face mask. However not bad the results were not as perfect as the confidence status. Most 351(98%) of the respondents know that the correct way of using the surgical face mask is with the white side facing in. 286(79.9%) know there are three layers in a surgical face mask. 338(94.4%) and 354(98.9%) know that wearing face mask protects them and to which extent the face mask should cover respectively. Almost all 357(99.7%) know the purpose of the metal strip is to fit on the nose. Only two-third (68.7%) of the respondents answered correctly when asked which layer acts as a filter media barrier.

This study revealed that overall knowledge and practice of C/C was good and most participants demonstrated positive attitudes toward the use of face masks. Which is different from the study of health workers in Ethiopia by Tadesse T et.al (2020) where the level of knowledge and attitude towards face mask utilization was relatively low, and the level of proper face mask utilization was quite low.

The participants scored good on all knowledge questions but there was a lack of knowledge on the 10% of the respondents when asked about the number of layers in a surgical mask and 31.3% answered wrongly when asked about which layer acts as a filter media barrier. This is however better than the results of the study by Tadesse T et.al (2020) of health workers where only two hundred fifty-four (62.3%) and 230 (56.4%) of the participants know the layers of the surgical mask and the layer which acts as a filter media, respectively.

4.1.3 Attitude of Ethiopian cabin crew regarding the use of face masks

Respondents were asked six questions to describe their level of agreement in a five-scale response format from “strongly disagree” to “strongly agree”. The 5-point Likert scale response options, scored from 1 to 5, were strongly disagree, disagree, neutral, agree, and strongly agree. Responses for negative statements like A4 and A5 were weighted in the reverse order. It is to be noted that the choice of these numbers are only for convenience. Subscale scores were obtained by summing item scores and dividing by the total number of items. If it is above or equal to the

average it was considered a positive attitude. The average of the scales being 3, mean scores for all attitude questions were above 3 meaning the respondents have a positive attitude. The total Mean(SD) being 4.125(0.966) shows a positive attitude.

A1: I am worried when I think of the Pandemic

A2: I believe wearing face mask will protect me from contracting covid-19

A3: I believe the protective effect of face masks can be severely reduced by their inappropriate use

A4: I believe masks are harmful as they cause difficulty breathing

A5: I shouldn't be forced to wear a mask

A6: I think the pandemic is serious

Scale: 1=Strongly Disagree, 2=Disagree,3=Neutral,4=Agree,5=Strongly Agree

Table 5: Descriptive statistics of the Attitude of Ethiopian cabin crew regarding the use of face masks

	Frequency (%)					**Mean (SD)**
	1	**2**	**3**	**4**	**5**	
A1	9(2.5)	36(10.1)	13(3.6)	113(31.6)	187(52.2)	4.21(1.071)
A2	2(0.6)	50(14)	4(1.1)	61(17)	241(67.3)	4.37(1.078)
A3	2(0.6)	7(2)	12(3.4)	63(17.6)	274(76.5)	4.68(0.687)
A4	5(1.4)	220(61.3)	21(5.8)	96(26.7)	17(4.7)	3.28(1.025)
A5	40(11.2)	229(64)	21(5.9)	38(10.6)	30(8.4)	3.59(1.088)
A6	3(0.8)	22(6.1)	3(0.8)	51(14.2)	279(77.9)	4.62(0.850)

Source: Own survey, 2021

Most 300(84.1%) and 302(84.3%) of the respondents are worried when they think of covid-19 and believe surgical face mask will protect them from contracting the disease respectively. 337(94.1%) of the respondents agree that the protective effect of surgical face mask can be reduced by their inappropriate use. 330(92.1%) agree that the pandemic is serious. However not majority 113(31.4%) and 68(19%) agree that surgical face masks are harmful as they cause difficulty breathing and shouldn't be forced to wear face mask respectively.

Table 6: Summary of Demographic factors and Attitude scores

		attitude11
		Mean
Marital status	Married	4.09(0.41)
	Single	4.14(0.39)
	Widow	4.11(0.35)
	Divorced	4.00(0.33)
Gender	Male	4.01(0.4)
	Female	4.13(0.39)
Age	20-29	4.15(0.39)
	30-39	3.99(0.38)
	40-49	4.19(0.36)
	above 50	4.07(0.48)
Educational status	High school graduate	4.12(0.41)
	Diploma	4.15(0.38)
	Degree	4.13(0.39)
	Master's degree and above	3.98(0.36)
years of work experience	0-5	4.15(0.39)
	6-10	4.03(0.42)
	11-15	4.11(0.35)
	16-20	4.00(0.36)
	21-25	4.21(0.47)
	26-30	4.19(0.39)
	above 30 years	4.15(0.33)

Source: Own survey, 2021

The study has demonstrated a good attitude towards wearing face masks. In this particular study, respondents were aware of the benefits of wearing face masks and acknowledged that the pandemic is serious. However only 225(62.7 %) strongly disagree that masks are harmful as they

cause difficulty breathing. This barriers against doing so may have decreased their willingness to comply and should be further investigated in future studies. There are claims on different social media about the use of masks in that they limit the amount of oxygen getting into the body. The WHO however says: "The prolonged use of medical masks when properly worn, does not cause CO2 intoxication nor oxygen deficiency. The study by Habtamu et.al (2020) on the Community's misconception about COVID-19 and its associated factors among Gondar town residents, Northwest Ethiopia states that stakeholders ought to build community perceptions about COVID 19. To resolve misinformation about COVID-19, accurate and relevant information should be provided to the community using appropriate communication media.

4.1.4 Practice of face mask utilization by Ethiopian airlines cabin crew

Respondents were asked ten questions to describe their level of frequency in a five-scale response format from "Never" to "Always". The 5-point Likert scale response options, scored from 1 to 5, were never, rarely, sometimes, often and always. Responses for negative statements like P1 and P2 were weighted in the reverse order. It is to be noted that the choice of these numbers are only for convenience. Subscale scores were obtained by summing item scores and dividing by the total number of items. If it is above or equal to the average it was considered a good practice. The average of the scales being 3, mean scores for all practice questions were above 3 meaning the respondents have a good practice.

P1: During service, if a passenger can't hear what I say, I will remove my mask.

P2: If I am not sick, I store the used surgical mask in a bag for later use

P3: I wear a mask outstation in public places to protect myself against covid-19

P4: I dispose my mask in the yellow-coded bag

P5: I clean my hands with alcohol-based hand rub or soap and water before putting on a mask

P6: I cover my mouth and nose with mask and make sure there are no gaps between my face and the mask

P7: I avoid touching the mask while using it

P8: I replace the mask with a new one as soon as it is damp.

P9: While removing the mask, I remove it from behind without touching the front of the mask; discard immediately in a closed bin.

P10: After removing the mask, I clean my hands with alcohol based hand rub or soap and water
Scale: 1=Never, 2=Rarely ,3=Sometimes ,4=Often ,5=Always

Table 7 Descriptive statistics of the Practice of Ethiopian cabin crew regarding the use of face masks

	Frequency (%)					**Mean (SD)**
	1	**2**	**3**	**4**	**5**	
P1	332(93)	30(5.6)	5(1.4)	----	----	4.92(0.324)
P2	217(60.6)	101(28.2)	30(8.4)	10(2.8)	----	4.47(0.765)
P3	----	4(1.1)	12(3.4)	32(8.9)	310(86.6)	4.81(0.537)
P4	17(4.7)	22(6.1)	85(23.77)	71(19.8)	163(45.5)	3.95(1.169)
P5	----	----	1(0.3)	56(15.5)	301(83.1)	4.84(0.376)
P6	----	14(3.9)	64(17.9)	70(19.6)	210(58.7)	4.33(0.903)
P7	----	9(2.5)	55(15.4)	159(44.4)	135(37.7)	4.17(0.777)
P8	----	----	4(1.1)	111(31)	243(67.9)	4.63(0.483)
P9	17(4.7)	22(6.1)	85(23.7)	71(19.8)	163(45.5)	4.67(0.495)
P10	----	----	1(0.3)	56(15.6)	301(84.1)	4.68(0.467)

Source: Own survey, 2021

Majority 332(93%) said they would never remove their mask during service even if a passenger can't hear what they are saying. 310(86.6%) and 301(83.1%) wear a mask at outstation and clean hands with alcohol-based hand rub or soap and water before putting on a mask respectively. Only 217 (60.6%) and 163 (45.5%) would never store the used mask in a bag for later use and always dispose used mask in the yellow coded bag. 243(67.9%) would always replace the mask with a new one as soon as it is damp. 135(37.7%) avoid touching the mask while using it. 210(58.7%) always cover mouth and nose with mask and make sure there are no gaps between face and mask.

When the participants were questioned if they disposed used masks in the yellow colored bags, only 163(45.5%) answered and the rest of the participants either do it sometimes or not at all. Another aspect of the spread of covid-19 is the improper management of medical waste. Guidelines and strict implementation of medical waste management should be carefully considered to reduce the risk of the pandemic spreading to the cabin and to the environment in general. 243(67.9%) always replace the mask with a new one as soon as it is damp the rest of the respondents also do so but not every time. This suggests that the C/C know what is right and do what is right but not always indicating that there is a need to investigate other factors like fatigue that gets them to deviate from standard. Lee et.al (2020) suggests that simply spending effort to promote belief and increase knowledge of a health behavior for a population is unlikely to result in a behavioral change. Efforts should focus on directly teaching the required skill and modifying factors that have considerable effect on behavioral change.

Table 8: Summary of Demographic factors and Practice scores

		practice11
		Mean(SD)
Educational status	High school graduate	4.55(0.21)
	Diploma	4.52(0.25)
	Degree	4.55(0.23)
	Master's degree and above	4.63(0.17)
Gender	Male	4.56(0.24)
	Female	4.55(0.23)
Age	20-29	4.55(0.22)
	30-39	4.58(0.24)
	40-49	4.56(0.16)
	above 50	4.29(0.22)
Marital status	Married	4.55(0.22)
	Single	4.55(0.22)
	Widow	4.43(0.49)
	Divorced	4.38(0.25)
years of work experience	0-5	4.54(0.23)
	6-10	4.56(0.21)
	11-15	4.61(0.20)
	16-20	4.57(0.81)
	21-25	4.30(0.29)
	26-30	4.55(0.24)
	above 30 years	4.58(0.23)

Source: Own survey, 2021

Table 9: Results of Multiple linear regression on factors associated with good face mask, knowledge, attitude and practice

Variable	Coefficient	Standard error	t	P value
knowledge				
Age (40-49)	3.355	1.022	3.284	0.001
Years of experience (6-10)	-1.281	0.492	-2.606	0.01
Marital status (married)	-1.454	0.709	-2.051	0.041
Attitude				
Age (30-39)	-0.153	-2.716	-2.555	0.007
Practice				
Years of experience (11-15)	0.247	0.96	2.579	0.01
Years of experience (16-20)	0.36	0.135	2.661	0.008
Age (20-29)	0.247	0.96	2.579	0.001
Age (30-39)	0.271	0.092	2.942	0.03

Source: Own survey, 2021

The results from multiple linear regression analysis of variables that score good on KAP indicators show that Age groups between 40 and 49 (β:3.355, P=0.001), years of experience of 6-10 years (β: -1.281, P=0.01) and married (β:-1.454, P=0.041) was significantly associated with higher knowledge score whereas age groups between 30 and 39 (β :-0.153, P=0.007) were associated with high attitude score. Years of experience (11-15) and (16-20) with (β:0.247, P=0.01) and (β: 0.36, P=0.008) respectively and Age (20-29) and (30-39) with (β:0.247, P=0.001) and (β:0.271, P=0.03) respectively were predictors of practice score.

Table 10: Correlation between scores of knowledge, attitude and practice towards use of face mask use.

Variable(s)	Knowledge	Attitude	Practice
Knowledge	1	-	-
Attitude	0.12	1	-
Practice	0.311	0.44	1

Source: Own survey, 2021

Correlation is significant at the 0.01 level (2-tailed)

There was positive and significant correlation between knowledge-practice, knowledge-attitude, and attitude-practice. The correlation coefficients were (0.311, 0.12 and 0.44, respectively $P<0.01$) as shown in table 10. Similar levels of association between these variables were documented by (Yaser A et.al, 2020) in a study conducted in Saudi Arabia on the Community practice of using face masks for the prevention of covid-19. This reaffirms that better knowledge and attitudes associate with better practices. Therefore, it is paramount to work on updating cabin crew awareness and developing right attitude towards the use of face masks.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

In this section the summary, conclusions and recommendation were derived from the research findings. The main purpose of this study is to assess the knowledge, attitude and practice of proper use of face mask use by Ethiopian airlines cabin crew. The results of the questionnaire survey and discussion of the findings in line with the literature review were presented in section four of this paper.

5.1 Summary of findings

Before going to the main analysis of the study, a reliability test was administered to check whether the questionnaire is reliable or not. In this regard, the questionnaire was reliable and acceptable with Cronbach's Alpha result greater than 0.70.

Related to the demographic characteristics, it could be inferred that the composition of younger staff and most of them having an experience of less than five years calls for continuous training. Research on health behaviors in young people demonstrates that perceived susceptibility predicted positive change related to certain health behaviors (Greene & Brinn, 2003; Li et al., 2003; Steers et al., 1996). Although there is a lack of research on perceived benefits as an impetus to behavior change in occupational settings, especially as it relates to adolescents, it is possible to hypothesize that if young workers are made aware of the potential positive benefits from taking actions to prevent injury and illness, they may be more apt to enact and apply these abilities to specific workplace problems. Young people need the opportunity to increase self-efficacy, through building skills and confidence, to overcome the barriers to taking preventative actions. As the young worker experiences positive results and receives external reinforcement (including through training and interactions with supervisors and co-workers), she or he is more likely to experience self-efficacy (Runyan et al., 2012).

I. Major findings regarding to the first objectives, which focused on the assessment of cabin crew level of knowledge towards face mask.

This study revealed that overall knowledge and practice of C/C was good and most participants demonstrated positive attitudes toward the use of face masks. Which is different from the study of health workers in Ethiopia by Tadesse T et.al (2020) where the level of knowledge and attitude towards face mask utilization was relatively low, and the level of proper face mask utilization was quite low.

The participants scored good on all knowledge questions but there was a lack of knowledge on the 10% of the respondents when asked about the number of layers in a surgical mask and 31.3% answered wrongly when asked about which layer acts as a filter media barrier. This is however better than the results of the study by Tadesse T et.al (2020) of health workers where only two hundred fifty-four (62.3%) and 230 (56.4%) of the participants know the layers of the surgical mask and the layer which acts as a filter media, respectively.

II. Major findings regarding the attitude of cabin crew towards facemask.

Most 300(84.1%) and 302(84.3%) of the respondents are worried when they think of covid-19 and believe surgical face mask will protect them from contracting the disease respectively. 337(94.1%) of the respondents agree that the protective effect of surgical face mask can be reduced by their inappropriate use. 330(92.1%) agree that the pandemic is serious. However not majority 113(31.4%) and 68(19%) agree that surgical face masks are harmful as they cause difficulty breathing and shouldn't be forced to wear face mask respectively.

III. Major findings regarding the cabin crew practice of using facemask.

The findings suggests that the cabin crew know what is right and do what is right but not always indicating that there is a need to investigate other factors like fatigue that gets them to deviate from standard. Lee et.al (2020) suggests that simply spending effort to promote belief and increase knowledge of a health behavior for a population is unlikely to result in a behavioral change. Efforts should focus on directly teaching the required skill and modifying factors that have considerable effect on behavioral change

Contrary to the findings in this study about knowledge and attitude of the use of face masks, several studies reported a low level of knowledge and attitude of face mask use. The reviewed empirical literature also showed that some of the above listed barriers are also prevail while using face masks as prevention measures. The identified problems and the findings of this research are more or less similar even if there is variation due to their practical context of the projects

5.2 Conclusion

This study identified the knowledge, attitude, and practice of proper face mask utilization among cabin crew professionals in Ethiopian Airlines is good. Ethiopian airlines cabin crew were aware about proper use of face masks with a small knowledge gap that needs to be addressed by the stakeholders. This study contributes to a comprehensive understanding of the use of face mask in the flying community and reveals the underperformed areas. Although this particular study's respondents were aware of the benefits of wearing face masks, the barriers against doing so may have decreased their willingness to comply. Despite the good compliance and knowledge about the importance and when and how to wear face masks, findings suggested that the people can perform some steps correctly sometimes and perform them incorrectly at other times, which indicates that having knowledge and good attitude does not necessarily mean the practice will be good. This means there are other factors that affect the mask wearing practice which calls for investigation. In conclusion the findings and recommendations of this study are going to help improve the implementation of occupational safety and health and thereby positively affecting the quality of service passengers get by making total quality management processes work to increase productivity.

5.3 Recommendations

Based on the above findings, the following suggestions to improve Cabin crew's health safety by proper use of face masks are put forward for EAL. Rational use of face masks is the pressing issue of the time therefore authorities should provide accurate guidance on ways to correctly use face masks and emphasize on the importance of proper use of face mask use during this pandemic.

- Guidelines and strict implementation of medical waste management should be carefully considered by EAL to reduce the risk of the pandemic spreading to the cabin and to the environment in general.
- Periodic educational intervention by the airline for C/C to stay safe and protect our society from COVID-19.
- There must be an effective safety coordination and communication process through which safety ideas and instructions are freely and effectively communicated, Safety needs have to be adequately considered in all decision making processes by management and management decisions should suitably be balanced with adequate concerns on safety.
- EAL should develop health safety policies and changing health care attitude to think safety first, make arrangements to conduct periodic audits are to be established in order to determine whether the OSH management system and its elements are in place, adequate, and effective in protecting the safety and health of cabin crew and preventing incidents.
- An audit policy and programme should be developed, which includes a designation of auditor competency, the audit scope, the frequency of audits, audit methodology and reporting. identifying and analyzing the root causes of any non-conformities with relevant OSH regulations and/or OSH management systems arrangements.
- Arrangements should be established and maintained for the continual improvement of the relevant elements of the OSH management system and the system as a whole.
- EAL would benefit from considering mandatory vaccination against covid-19 for cabin crew members.

5.3 Recommendation for future Research

This study is a descriptive one and doesn't address the factors that affect the use of face masks by C/C It is therefore recommended further research can be applied to study the factors that affect the compliance of proper use of face mask by C/C in EAL. Further studies are needed to evaluate the effectiveness of interventions aimed at improving mask-wearing. Further research can also be applied to assess the KAP of other preventive measures by C/C in EAL. This will help the airline to make necessary adjustments to update the fight against covid-19.

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Appendix

Addis Ababa University, College of Commerce, & Economics, School of Commerce,

MA in Project Management

January 18, 2021

Dear Sir/Madam

I am a graduate student in Project Management at Addis Ababa University, School of Commerce. I am undertaking a research project on "Assessment of Use of Face Mask by cabin crew during the COVID-19 Pandemic in Ethiopian Airlines" for the partial fulfillment of the requirements of the degree of Master of Art in Project Management. The purpose of the study is to assess knowledge and attitude towards facemasks among cabin crew working in Ethiopian Airlines and the results of the study will have a paramount importance to cabin crew, travelers, the airline, shareholders and the country in general. To this end, this questionnaire is prepared to gather pertinent information.

The survey will take about 5-10minutes of your time. I sincerely assure you that the information you provide will be used only for academic purposes. Your response will be anonymous and only processed collective results will be presented in my report. Your involvement is regarded as a great input to the quality of the research results. Your honest and thoughtful response is invaluable.

NOTE: Your assistance to this research is strictly voluntary. You do not have to answer any question you wish not to.

Best Regards,

Haben Iyassu

A. Questionnaire for Cabin crew

SECTION 1: DEMOGRAPHIC PROFILE OFRESPONDENTS

Please indicate the following by ticking (√) on the spaces in front of the response options

1. Gender:

Male

Female

2. Age:

20-29

30-39

40-49

Above 50

3. Marital status

Married

Single

Widow

Divorced

4. Years of work experience

0-5 years

6-10 years

11-15 years

16-20 years

21-25 years

26-30 years

Above 30 years

5. Educational Status

Diploma

Degree

Masters degree and above

Section 2: Knowledge about the correct usage of masks

1. Which is the correct way of using surgical face mask to protect against COVID-19?

White side facing in

White side facing out

2. How many layers are there in a surgical mask

Four

Three

two

3. Can wearing a surgical mask protect you from COVID-19?

Yes

no

4. Which layer acts as a filter media barrier?

First layer

Middle layer

Last layer

5. **Are you confident enough to know the correct steps of wearing a face mask?**

Yes

No

6. **For proper wearing, to which extent the surgical mask should cover?**

Nose only

Nose and mouth

Nose, mouth and chin

7. **What is the purpose of the metal strip on the surgical mask**?

To fit on the nose

To fit on the chin

Section 3: Attitude about the correct usage of masks

1. **I am worried when I think of the pandemic.**

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. **I believe wearing face mask will protect me from contracting covid-19.**

Strongly Agree Agree Neutral Disagree Strongly Disagree

3. **I believe the protective effect of face masks can be severely reduced by their inappropriate use**.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. **I believe masks are harmful as they cause difficulty breathing.**

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. **I shouldn't be forced to wear a mask.**

Strongly Agree Agree Neutral Disagree Strongly Disagree

6. **I think the pandemic is serious**.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Section 4: Practices about the correct usage of masks

1. **During service, if a passenger can't hear what I am saying, I will you remove my mask.**
   Never Rarely Sometimes Often Always
2. **If I am are not sick, I store the used surgical mask in a bag for later use.**
   Never Rarely Sometimes Often Always
3. **I wear a mask outstation in public places to protect yourself against covid-19.**
   Never Rarely Sometimes Often Always
4. **I dispose my used mask in the yellow-coded bag.**
   Never Rarely Sometimes Often Always
5. **I clean my hands with alcohol-based hand rub or soap and water before putting on a mask.**

   Never Rarely Sometimes Often Always

6. **I cover my mouth and nose with mask and make sure there are no gaps between your face and the mask.**

   Never Rarely Sometimes Often Always

7. **I avoid touching the mask while using it.**

   Never Rarely Sometimes Often Always

8. **I replace the mask with a new one as soon as it is damp.**

   Never Rarely Sometimes Often Always

9. **While removing the mask, I remove it from behind without touching the front of mask; discard immediately in a closed bin.**

   Never Rarely Sometimes Often Always

10. **After removing the mask, I clean my hands with alchol based hand rub or soap and water.**

    Never Rarely Sometimes Often Always