

Position of the Textile and Garment Sector in the Fight against COVID-19 Pandemic and the Implication of Face Mask

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ABSTRACT

This study investigated the position of the textile and garment sector in the context of the COVID-19 pandemic which has caused economic loss to all industries across the world through necessary measures observed to stop its spread. In this study, 150 questionnaires were produced for north-central, north-west, and northeast for data collection. The study's results revealed that a high number of respondents from north-central, northwest, and northeast indicated that textiles have assisted greatly in curbing the spread of the COVID-19 pandemic. In the same vein, most respondents from north-central, north-west, and north-east strongly agreed that garment producers have contributed greatly by producing face masks to mitigate the spread of the virus. Our results also revealed that most of the respondents indicated that they provided the face masks they wore in fighting the spread of the virus for themselves compared to those who indicated that their face masks were provided by government, non-governmental organizations and others. In addition, the results showed that high number of the respondents in the three geographical zones indicated that they wore their face masks all the time and most time, while few respondents indicated that they wore their face masks for less time while others did not wear at all. Moreover, the results further revealed that most respondents from the three zones indicated that they did not feel comfortable when they wore face masks, while only a few respondents indicated that they were comfortable with their face masks. It is therefore worthy to note that the face mask which is a product of the textile and garment sector played a very prominent role during the era of the Covid-19 pandemic.

Keywords: Textile, Garment, Face mask, Covid-19, Pandemic.

INTRODUCTION

In this context of worldwide epidemic disease called Covid-19, textile and garment sector has played a very huge role in preventing people from being infected with the disease. Textile materials most especially medical textile products such as surgical caps, masks, hand gloves, aprons, shoe covers, sleeve covers, among others become more life-saving necessity to the medical personnel, patients and every other person across the world (Shaikh and Shariful, 2020). These medical textile products are grouped as the non-pharmaceutical countermeasure applied worldwide to protect medical professionals and other people from being infected with covid-19. Although, most common face mask used by people to get them prevented from the virus infection is the face mask which is produced by fashion designers or garment makers using textile fabrics such as woven, knitted or non-woven fabrics. Plate 1 shows a person who wore face mask to prevent herself from being infected with the virus.

Before the outbreak of Covid-19 pandemic, it was only medical professionals and those who work in a hazardous environment that are under compulsion to wear face masks in order to prevent

them from being infected with one disease or the other. However, the current world outbreak of disease which emanated from China in December 2019 has made it mandatory for most people across the globe to be conscious of wearing face masks so that they would not be infected or die of the disease.

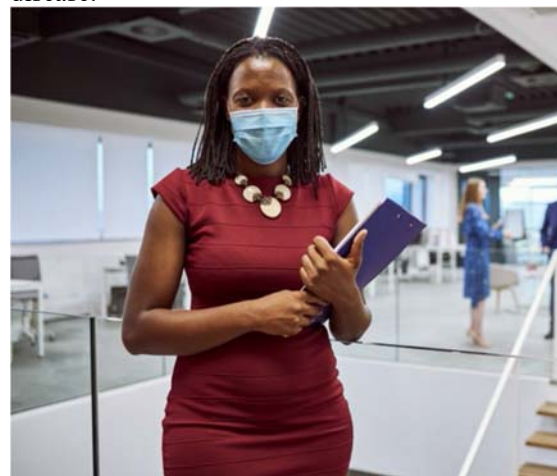


Plate 1: A woman putting on a face mask (Source: Ute, Przemyslaw, Ana and Anna (nd))

It has been medically announced that the most common symptoms of the Covid-19 pandemic in

people who are infected include fever, cough, fatigue, difficulty breathing, loss of smell and taste, dry cough, sneezing, and throat pain (Shaikh and Shariful, 2020; Howard et al., 2020). This virus can easily spread from person to person through close intimacy, handshaking, embracing, close body contact, sneezing, talking, singing, and coughing among others. In addition, people can certainly contact the virus and spread to other places by touching surfaces or objects that have been contaminated with the virus (WHO, 2020a; Rodriguez et al., 2020). Apart from the use of face mask to prevent spreading, other suggested preventive measures to avoid spreading of the virus include frequent hand washing, observing social distance among people, creation of quarantine centers, and avoidance of unwashed hands on the face (Palmieri and Papi, 2020).

Surgical masks are made of viscose, polyester, polypropylene, etc. fibers. Surgical masks are mainly in the form of nonwoven while others are made up of cotton knitted fabrics (Givi et al., 2020).

The people who are vulnerable to this disease are the people of over 40 years, and while under 40 years seem to be less vulnerable (WHO, 2020c). Additionally, People with weak immune systems and people with conditions such as diabetes, heart and lung disease are also seem to be more vulnerable to this deadly disease.

Lima et al. 2020, revealed that low coverage cloth face masks made of 100% cotton, scarf, pillowcase, antimicrobial pillowcase, silk and linen, tea towel, or vacuum bag, present marginal/reasonable protection against particles while high coverage cloth masks provide high protection. They concluded that cloth face masks are a preventive measure with moderate efficacy in preventing the dissemination of respiratory infections caused by particles of the same size or smaller than those of SARS-CoV-2. The types of mask suitable for use and influence the efficacy of the barrier against droplets are fabric layer masks and washable masks, breathable, tight weave and knitted fabrics, disposable masks, and inner filter pocket masks, among others (National Center for Immunization and Respiratory Diseases, NCIRD, 2021).

In Howard et al., 2020 reviewed study, the preponderance of evidence shows that mask-wearing reduces transmissibility per contact by reducing transmission of infected respiratory particles in both laboratory and clinical contexts. In addition, when the compliance of wearing face

masks in public is high, transmission of the virus would be reduced. The authors recommended the adoption of public cloth mask-wearing, as an effective form of fast-tracking the spread, in conjunction with existing hygiene, distancing, and contact tracing strategies, when shortages of medical masks persist.

A cohort study was carried out in Beijing to investigate the impact of the use of face masks in the household in the reduction of secondary transmission of SARSCoV-2. The finding reveals that face masks were 79% effective in preventing the spread of the virus (Wang et al, 2020). Several other reports (Tuan et al., 2007; Chu et al., 2020; Mac Intyre and Chughtai, 2020; Lyu and Wehby, 2020) revealed that face masks are highly effective with high efficacy in the reduction of COVID-19 pandemic transmission. At the scientific briefing (2020) it was presented that airborne transmission of COVID-19 can occur during medical procedures that generate aerosols (aerosol-generating procedures). World Health Organization (WHO), together with the scientific community, has been actively discussing and evaluating whether Covid-19 pandemic may possibly spread through aerosols in the absence of aerosol generating procedures, particularly in indoor settings with poor ventilation. Though, physics of exhaled air and flow physics have generated hypotheses about possible mechanisms of Covid-19 pandemic transmission through aerosols (Mittal, Ni and Seo, 2020). However, it was reviewed that the proportion of exhaled droplet nuclei or of respiratory droplets that disperse to produce aerosols, and the infectious dose of viable Covid-19 required to cause infection in another person are not known, but it has been studied for other respiratory viruses (WHO, 2020b; Scientific Briefing, 2020).

OBJECTIVES OF THE STUDY

- To know the extent to which textiles has contributed to curbing the spread of the Covid-19 pandemic.
- To know the extent to which garment producers have contributed in fighting against the spread of the Covid-19 pandemic.
- To find out the means through which people got their face masks.
- To investigate the extent in which people were conscious in wearing their face masks during Covid-19 outbreak.
- To find out whether people were comfortable with wearing face masks or not.

RESEARCH QUESTIONS

- To what extent do textile (face mask) has assisted the society to prevent the spread of Covid-19 pandemic?
- To what extent do garment producers have helped the society to prevent people from being infected with Covid-19 pandemic?
- Who or which provided your face mask?
- To what extent do you wear a face mask to prevent you from being infected or spreading the Covid-19 pandemic?
- How comfortable are you with the wearing of the face mask?

METHODS

Design of the study: Descriptive survey research is adopted in this study to investigate the impact of the use of face masks in the current context of the COVID-19 pandemic. The study is focused on northern part of Nigeria which comprises three geographical areas: North-central, North-west, and North-east. Under these geographical areas: North-central consists of 7 states, North-west 7 states, and North-east 6 states.

Sampling, sample size, and participants: In this study, a state was randomly selected from each geographical area, these states include Nasarawa (North-central), Adamawa (north-east), and Zamfara (North-west), and a higher institution in these states was chosen for the collection of data.

This study was carried out after the lockdown was lifted and students were back to school.

Instrument and data collection: The study instrument was structurally designed as a multiple-choice questionnaire based on the research questions. The respondents (students) were administered questionnaires and they were required to read the questions and then respond by choosing from the multiple-choice options provided. After collecting the data, they were then analyzed by frequency counting.

RESULTS AND DISCUSSION

Figures 1-5 show the results of this survey study. Figure 1 reveals the results on the extent in which textile has assisted in curbing the spread of Covid-19 pandemic. Out of 150 questionnaires each that were sent to north-central, north-west and north-east, 142, 145, and 143 questions respectively were responded to. The results further indicate that 79, 85, 126 of the respondents from north-central, north-west, and north-east respectively strongly agreed that textile has assisted in curbing the spread of covid-19 pandemic. Furthermore, 54, 57, and 12 respondents respectively indicated a high extent to which textiles have contributed in limiting the spread of the virus, while 5, 2, and 4; 4, 1, and 1 of the respondents signified average and below average respectively in which textile has helped in preventing the spread of the virus, and no respondent indicates for low extent.

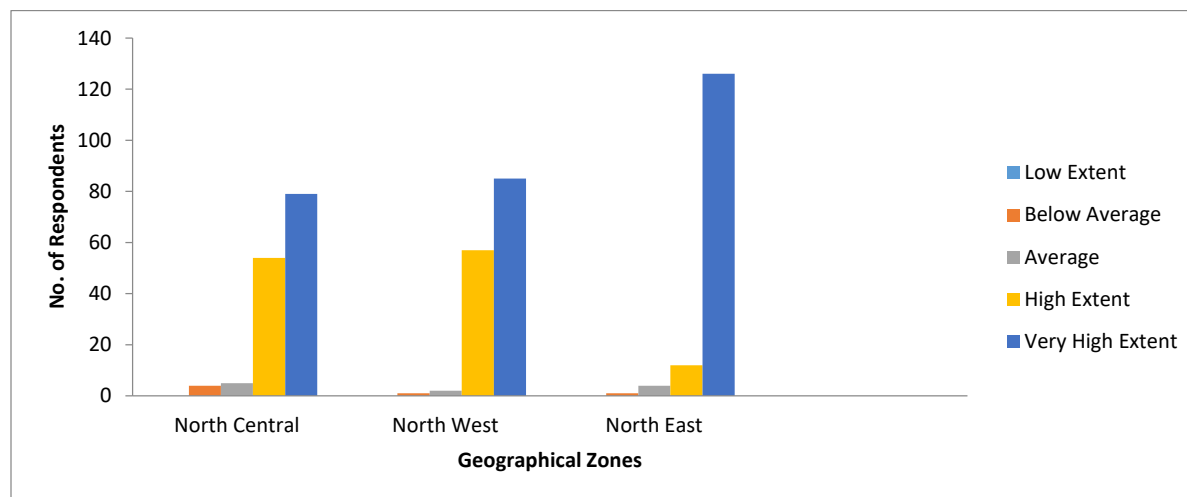


Figure 1: Result for the extent in which textile has contributed in preventing the spread of Covid-19 pandemic.

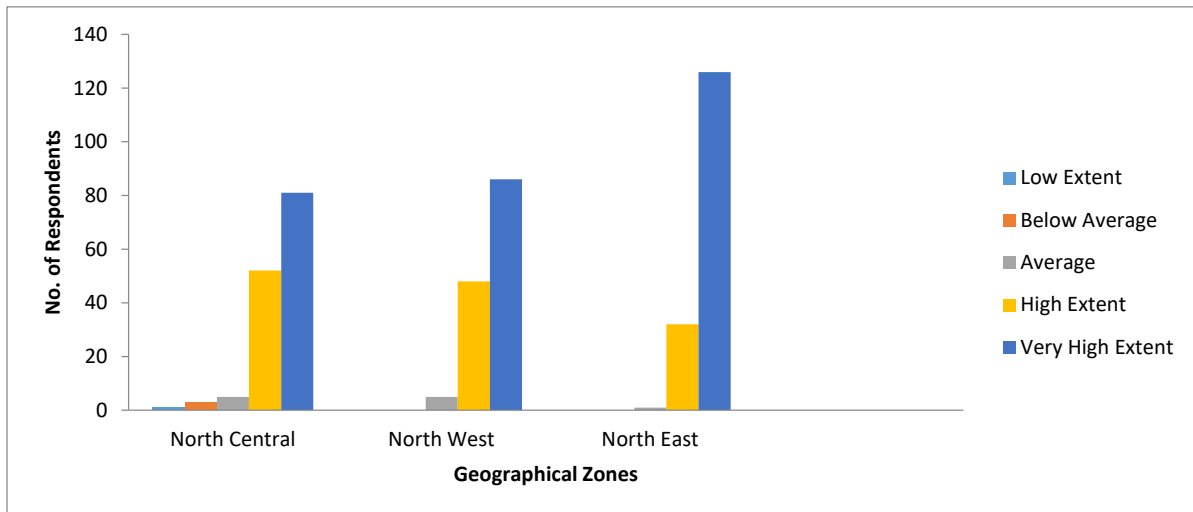


Figure 2: The results of the extent in which garment producers have assisted in fighting against the spread of Covid-19 pandemic

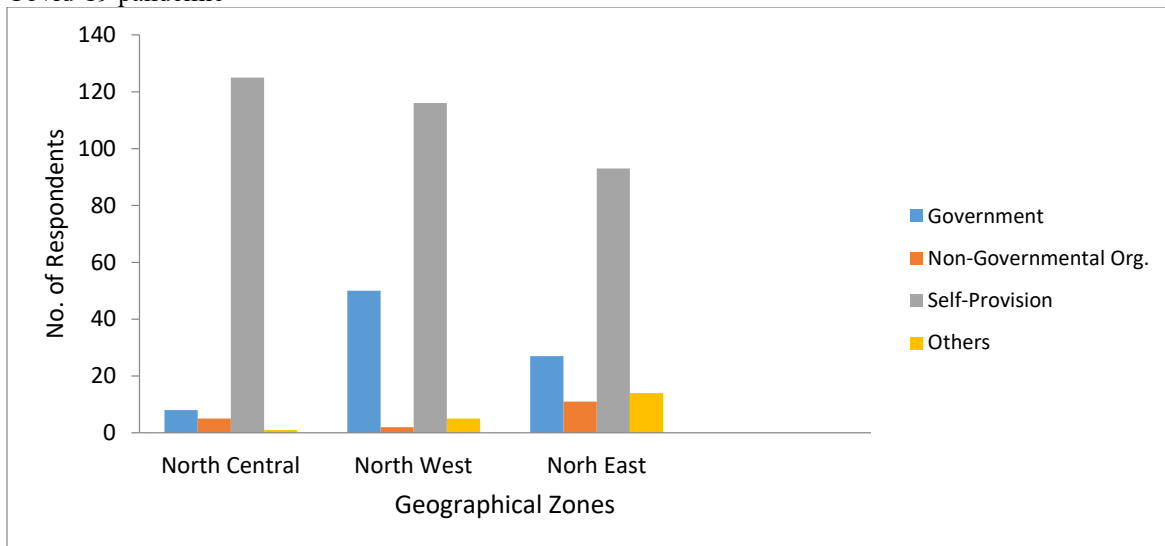


Figure 3: The results on who or which provided face mask for people to prevent them from being infected with Covid-19 pandemic.

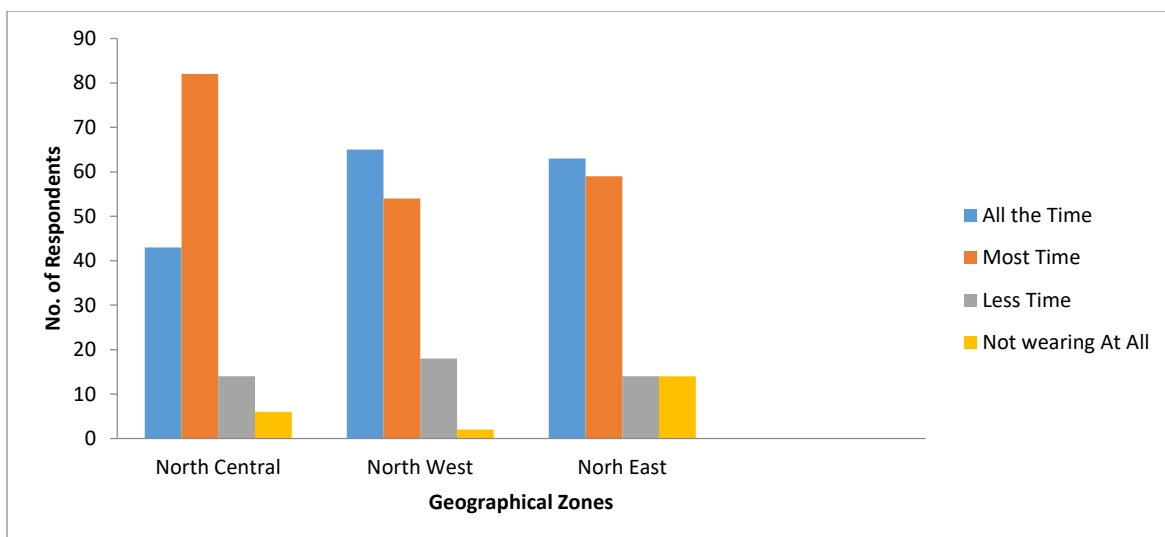


Figure 4: The results for, 'to what extent have you been wearing face mask to prevent you from being infected or the spread of covid-19 pandemic'?

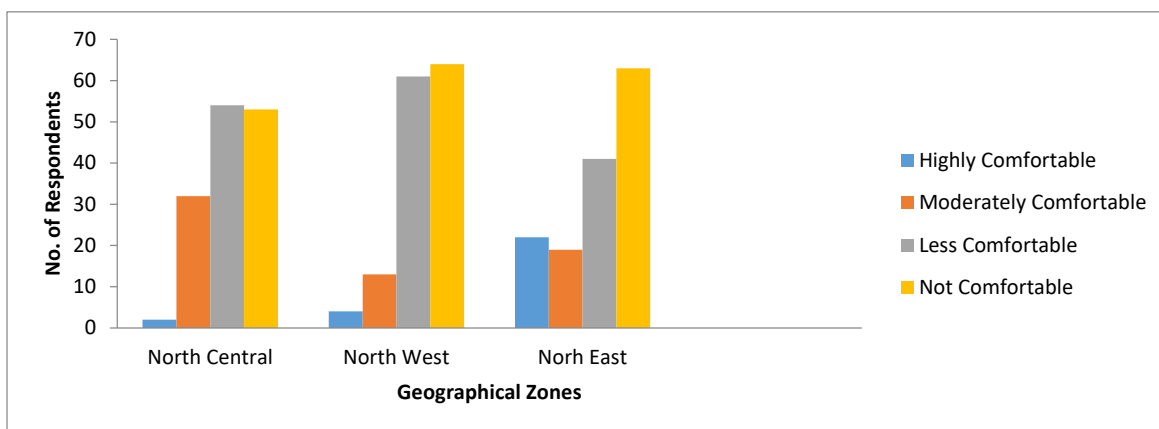


Figure 5: The results for how comfortable were the people who wore face mask to prevent themselves being infected with the virus

The results in Figure 2 show the extent in which garment producers have assisted in fighting against the spread of the Covid-19 pandemic. Out of the 150 questions; 142, 139, and 143 respondents responded to the question. Respondents from north-central (81), north-west (86), and north-east (110) indicated a very high extent in which garment producers have contributed in fighting against the spread of the Covid-19 pandemic. High extent was indicated by 52, 48, and 32 respondents from north-central, north-west, and north-east respectively, while 5, 5, and 1 respondents signified for average. The results further show that in north-central 1 and 3 respondents indicate for low extent and below average respectively, and no respondent indicates for low extent and below average in north-west and north-east.

Figure 3 shows the result of who provided the face masks for people during the fight against the spread of COVID-19. Out of 150 questionnaires, each sent to north-central, north-west, and north-east; 139, 138, and 145 were responded to. The results show that high number of the respondents indicated in each geographical zone that the face masks they used in preventing them from being infected with the virus were provided by themselves. For government provision, the north-central accounted for 8 respondents, while north-west and north-east accounted for 15 and 27 respondents respectively, while for non-governmental organizations, the north-central (5), north-west (2), and north-east (11). In addition, north-central (125), north-west (116) and north-east (93) for self-provision, and for others, north-central accounted for 1 respondent, while north-west and north-east accounted for 5 and 14 respondents.

The results for what extent people have adhered to wearing of face mask to prevent them from being infected with the virus are presented in Figure 4.

From the results, the number of respondents from north-central, north-west, and north-east who indicate that they wore face masks all the time during the fight against the spreading of the COVID-19 pandemic are 43, 65, and 63 respectively, while those for most time are 82, 54 and 59 respectively. The results further reveal that 14, 18, and 14 respondents respectively wore face masks less time, while for not wearing at all are 6, 2, and 7 respondents from each zone respectively.

The results in Figure 5 revealed how comfortable people were when they put on face mask to prevent themselves from being infected with the Covid-19 pandemic. The result from the north-central shows that 53 respondents out of 150 questionnaires indicated that they do not feel comfortable while they put on face masks, while north-west and north-east account for 64 and 63 respondents. Those who feel less comfortable are 54 (north-central), 61 (north-west), and 41 (north-east). The results further revealed that 32, 13, and 19 respondents for north-central, north-west, and north-east indicated they were moderately comfortable, while 2, 4, and 22 respondents respectively indicated highly comfortable.

CONCLUSION

The textile and garment sector has enormously contributed to the fight against COVID-19 by producing the face masks worn by people. The face mask worn by the people prevents them from being infected with the virus and at the same time limits its spreading. However, many people who wore the face masks claimed that they were not comfortable and felt unrelaxed, but the situation has made it mandatory in order to save their lives. In the context of fighting against the spread of the virus, many people provided face masks for themselves, only a few people got their face masks from the government, non-governmental organizations, and

others. During the crisis, many people wore their face masks all the time, and most of the time, while very few people were careless and unconcerned about the wearing of the face masks.

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