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**Knowledge, Attitudes and Practices of Tailors towards the Business of Covid
Masks and Protective Gears in Ghana. A Critical Literature Review**

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Abstract

Purpose: The study sought to investigate Knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears in Ghana. A critical Literature review.

Methodology: This study adopted a desktop methodology. This study used secondary data from which include review of existing literature from already published studies and reports that was easily accessed through online journals and libraries.

Findings: The study findings demonstrate a high level of awareness of COVID-19 among the tailors and general civilians who frequently updated themselves on the pandemic through several information channels. The pandemic disease, was broadcasted daily through all media, including social media and mainstream media (such as public television channels and radio). The study showed that the tailors also had heard about the need for more masks primarily through national TV channels which represented the primary source of information for remote communities in particular, and social media. Since the outbreak, many tailors have taken the opportunity to make custom-made masks.

Unique Contribution to Theory, Practice and Policy:

The results suggest an urgent need for health education programs to hold optimistic attitudes and rebuilding of trust of the general public in health facilities in local hospitals to avoid the possible next wave of COVID-19. The study also recommends that the government together with international donors should support local tailors by giving them funds to buy material they can use to make more protective gears.

Keywords: *Knowledge, Attitudes and Practices, Tailors, COVID Masks, Protective Gears*

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INTRODUCTION

The novel severe acute respiratory syndrome coronavirus (SARS-CoV-2) that causes COVID-19 was first reported in December 2019 in Wuhan, Hubei province, China. The disease rapidly spread throughout the world, becoming a public health emergency of international concern a month later (Abate, 2020). This situation has disrupted social and community life and affected all types of human activities, severely disturbing national and international travel, supply chains, and the global manufacturing industry. In March 2020, the disease was declared a pandemic by the World Health Organization (WHO), which called for all countries to come together to take concerted action and implement strategies to combat the threat caused by the virus (Alves, 2021). In Africa, the first case of the disease was officially recorded on 14 February 2020 in Egypt, and shortly after, new cases were reported everywhere on the continent, with the spread driven mainly by international air travel (Akalu, 2020).

African countries were amongst the latest to be affected by the disease. The spread of the novel SARS-CoV-2 virus in this part of the world was worrisome because of the poor organization and lack of resources within the health systems. Co-morbidities amongst the population, and specific living conditions (i.e., population density in urban areas and lack of access to water, hygienic conditions, and sanitation) equally contributed to the spread. In the absence of an effective vaccine and medication against COVID-19, various governments around the world resorted to drastic measures to slow down the transmission to reduce pressure on healthcare providers. Most African countries adopted a 'suppression strategy' aiming to avoid transmission and keep cases to an absolute minimum. Lockdowns, quarantine regulations, contact tracing, and the closure of businesses, schools, and universities and the use of protective gears were the mechanism put forward to mitigate the pandemic (Al-hanawi, 2020).

These restrictions were accompanied by preventive measures such as social distancing in all age groups, hand washing, and facemask wearing. In comparison to vaccines and medications, preventive measures (classed as non-pharmaceutical interventions, NPIs), were cost-effective option to fight the spread of COVID-19. The compliance of the population with preventive measures is thus a crucial component in disease control strategies in low-income countries which face financial constraints for public health in general (Austrian, 2020). However, community buy-in to control measures may be largely affected by people's knowledge, attitudes, and practices (KAP) towards COVID-19. Lessons learnt from the SARS outbreak in 2003 suggest that knowledge and attitudes towards infectious diseases are associated with the level of panic and emotion in the population, which can further complicate attempts to prevent the spread of the disease (Azlan, 2020).

Studies assessing the knowledge, attitudes, and practices of the public in several countries in relation to COVID-19 have either generally focused on various sociodemographic characteristics to assess perceptions, beliefs, and behaviours of the general population or focused more specifically on frontline workers like healthcare personnel (Clement, 2020). A study conducted amongst young adults in Switzerland showed that men, the well-educated, wealthy people, and those without a migration background were reluctant to comply with hygiene-related practices to control the spread of the virus (Azlan, 2020). In Australia, the elderly and women were found to be the readiest to follow prescribed preventive measures in order to support health authorities in

their effort to control the disease .In Africa, physical distancing has been identified as the preventive measure with which people were most willing to comply when this was combined with incentives (Austrian, 2020).These studies have however not showed us how tailors play part towards the business of Covid masks and protective gears.

A tailoring business specializes in personally fitting garments to each customer's needs. Tailors also help customers make style decisions and offer alterations to existing garments. This comes in handy when the need for customized mask to fit the need of the common citizen is in place (Rug, 2021). Due to the shortage of protection gear, tailor-made masks have come in handy as they are re-usable, more affordable and effective than the surgical masks on the market. Tailor-made masks are easy to make using locally available materials and do not require sophisticated sewing machine. Tailoring requires basic skills but is still effective and people, especially the young ones in the rural areas, can use this mask as they go about their daily lives to prevent contracting COVID-19 and provides income to the tailors (Erfani, 2020).The sprout of COVID 19 has led to many tailors globally take advantage of their skills and earn from tailoring (Yapi, 2021).

A cross-sectional study using a multinational sample to assess the levels and determinants of public KAP towards COVID-19 in countries around the world found that the public have fair or good knowledge and practices regarding COVID-19, despite the existence of significant gaps that should be addressed (Hussain, 2020). These gaps will be the focus of future awareness efforts focusing on less advantaged groups and COVID-19 preventive measures associated with negative mental health effects. The level of KAP varies from country to country. In Iran, people's knowledge, attitudes, and practices regarding the disease are at a high level despite the existence of misconceptions about the disease (Lee, 2021). Evidence from Korea shows that misconceptions surrounding COVID-19 can be avoided through the promotion of public health knowledge and belief in the efficacy of interventions by health officials and policymakers. This can lead to an increase in precautionary behaviours amongst the public (Li, 2020).

Improving the KAP of the public is critical in ensuring the compliance of populations with preventive measures. Studies highlighted the need for developing effective health education programs that incorporate considerations of KAP-modifying factors (Lau, 2020). Those programs can take the form of community-based health campaigns to aid in reinforcing optimistic attitudes regarding the efficacy of measures and practices for preventing the spread and avoiding future outbreaks, and misconceptions surrounding COVID-19 (Manjante, 2020). The importance of considering cultural norms, belief systems, and perceptions in developing control measures against COVID-19 was also found to be critical (WHO, 2020). A bi-national survey in Egypt and Nigeria revealed that for the public to follow standard infection prevention and control measures adequately, governments need to gain the trust of citizens by strengthening health systems and improving surveillance activities for case detection in order to offer optimum health services to their communities (Hager, 2020).

Since February 2020, when the first COVID-19 cases were officially recorded in Iran, Roya and her fellow refugee tailors have produced more than 10,000 masks per day, which were delivered to health and humanitarian service providers across the country (Sengumpta, 2020). Since the outbreak of the pandemic, UNHCR has airlifted over 100 tons of medical aid in support of Iran's Ministry of Health, Medical Education and the Bureau for Aliens and Foreign Immigrants Affairs

(BAFIA). WFP also flew in more than three million surgical and N95 masks to help frontline health workers in Iran to stay safe.

Problem Statement

Since early 2020 Kenya has experienced a severe shortage of personal protective equipment (PPE) needed by the residents for fighting the COVID-19 pandemic (Emanuel et al., 2020). In protests covered by the news media, healthcare workers compared themselves to firefighters putting out fires without water and soldiers going into combat with cardboard body armor. Medical professionals have called for federal government action to mobilize and distribute adequate supplies of protective equipment, especially gloves, medical masks, goggles or face shields, gowns, and N95 respirators. N95 respirators, which have demonstrated efficacy in reducing respiratory infections among healthcare workers, have been in particularly short supply and very expensive bringing the need to improvise and adapt to the custom-made tailor protective masks (MacIntyre et al., 2014).

The personal protective equipment shortage is reflected in survey data on PPE usage and in data on COVID-19 morbidity and mortality. As of May 2020, 87% of nurses reported having to reuse a single-use disposable mask or N95 respirator, and 27% of nurses reported they had been exposed to confirmed COVID-19 patients without wearing appropriate PPE (NNU, 2020). As of July 28, 2020, at least 1842 nurses, doctors, physicians assistants, medical technicians, and other healthcare workers globally, and 342 in the US, died due to the virus, and many more became sick (Medscape, 2020). The CDC aggregates national data of 172,844 cases among healthcare personnel and 743 deaths (CDC, 2020b). Healthcare workers have died from COVID-related cases in all but 19 states.

Recently, three important studies have been conducted in this regard. First, Zhong et al. (2020) examined the knowledge, attitudes, and practices of the general public towards COVID-19 in China. They measured the knowledge score of each participant regarding COVID-19 on the basis of 12 questions. Their findings suggest that financially stable participants, especially women, have a high knowledge score, appropriate practices, and optimistic attitudes towards the successful control of COVID-19. Second, Azlan et al. (2020) also examined the knowledge, attitudes, and practices of the general public towards COVID-19 in the context of Malaysia using the same questionnaire developed by Zhong et al. (2020). They found a high knowledge score among the participants, a moderate level of appropriate practices, and high confidence among participants about the successful control of COVID-19. These studies employed authors' networks and online convenient sampling technique. Finally, Roy et al. (2020) also assessed the perceptions and behavioural changes among the population due to COVID-19 in India. In past, during the swine flu outbreak in the United Kingdom, a similar kind of study was conducted by Rubin et al. (2009). However none of these studies expound on knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears. This study will fill the conceptual gap on knowledge, attitudes and practices of tailors towards the business of COVID-19 masks and protective gears.

Theoretical Framework

The study will be guided by the knowledge creation theory propounded by Nonaka and Takeuchi (1995).

The Knowledge Creation Theory

This study will apply the knowledge creation theory by Nonaka and Takeuchi (1995). The theory specifically focuses on basic steps of knowledge management (KM) practices involving knowledge acquisition (through interaction, documents, and training), knowledge organization (through classification, repositories, and databases) and knowledge sharing (interaction, mentoring, seminars/conferences, and research). The theory explains two types of knowledge called tacit and explicit knowledge. Tacit knowledge is based on experience, skills, and beliefs while explicit knowledge is codified knowledge that is found in documents and databases. The knowledge creation theory espouses two dimensions of knowledge creation: the epistemological and ontological dimensions.

The epistemological dimension deals with the four modes of knowledge conversion, namely socialization (tacit to tacit) that creates synthesized knowledge; externalization (tacit to explicit) that creates conceptual knowledge; combination (explicit to explicit) that creates systematic knowledge; and internalization (explicit to tacit) that creates working knowledge. These modes of knowledge creation are dependent and interact to create a knowledge spiral to create new products and innovations. The ontological dimension of knowledge creation deals with the level at which knowledge conversion processes of identification, acquisition, development, sharing, preservation, and application of knowledge take place. The theory covers all the variables of this present study and provides a broad explanation and a robust theoretical perspective as much as possible. The theory, in particular, emphasizes on tacit knowledge, explicit knowledge, knowledge management practices, knowledge spiral, knowledge conversion, KM strategies, KM infrastructure, and knowledge adoption.

This theory encompasses wide-applicability and provides a broad explanation and theoretical perspective on knowledge management practices involving creation, acquisition, development, sharing, preservation, and application of knowledge. The theory is an application to various organizations such as institutions, libraries, business sectors, and other governmental organizations. The rationale for applying the theory of Nonaka and Takeuchi (1995) is that it is widely used in various research works similar to the present one. For instance Chun Ming et al. (2012) in a study of factors affecting KM success: the fit perspectives based on an aerospace manufacturing company in Taiwan, the study of Gregorio et al. (2008) on processes of knowledge creation in knowledge-intensive firms: empirical evidence from Boston's route 128 and Spain, the study of Choi and Lee (2002) on knowledge management strategy and its link to the knowledge creation process, the study of Aybuke et al. (2008) that investigated KM practices in software development organizations: an Australian experience, the study of Mellor (2011) on knowledge management and information systems: strategies for growing organizations, the study of Boisot (1998) on knowledge assets: securing competitive advantage in the information economy, the study of Gourlay (2006) of the SECI model of knowledge creation: some empirical shortcomings, the study of Lwoga (2011) on knowledge management approaches in managing agricultural indigenous and exogenous knowledge in Tanzania, and the study of Lwoga et al.(2010) on

managing indigenous knowledge for sustainable agricultural development in developing countries: a case study of Tanzania. This study adopted the Nonaka and Takeuchi knowledge-creation theory because it was suitable for this research due to its focus on the adoption of knowledge and applying it in day to day life. For our case the acquisition of knowledge for the tailors will help them build on their mask making skills and fight the pandemic.

LITERATURE REVIEW

Yapi, Hounbedji, N’guessan, Dindé, Sanhoun, Amin, & Bonfoh, (2021) conducted a study on knowledge, attitudes, and practices (KAP) regarding the COVID-19 outbreak in Côte d’Ivoire with the title “Understanding the Non-Compliance of Populations with Non-Pharmaceutical Interventions”. Participants were invited to complete a questionnaire online, by phone, or face-to-face. Chi-squared, Fisher’s exact, and Kruskal–Wallis tests were used to compare the frequency of responses regarding compliance with preventive measures. Data were validated for 564 individuals. Over one-third of respondents believed that COVID-19 was related to non-natural causes. Though the disease was perceived as severe, respondents did not consider it to be highly infectious. Overall, 35.6% of respondents fully trust health officials in the management of the pandemic, and 34.6% trusted them moderately. Individuals who believed COVID-19 was a disease caused by a pathogen and the well-educated were likely to comply with preventive measures. The study presented a conceptual gap as it focused on knowledge, attitudes, and practices (KAP) regarding the COVID-19 outbreak in Côte d’Ivoire while our study focused on knowledge, attitudes and practices of tailors towards the business of COVID-19 masks and protective gears.

Muhammad and Younas (2021), conducted a study to examine the knowledge, attitudes, and practices of university students and graduates in Pakistan regarding COVID-19. For this purpose, cross-sectional data was collected from 1789 participants through an online survey conducted between July 12 and August 10. The survey instrument consists of demographic characteristics, 13 items on knowledge, 6 items on attitudes, and 3 items on practices, modified from a previously published questionnaire on COVID-19. Statistical analyses were based on descriptive statistics, chi-square tests, and analysis of variance (ANOVA). The overall correct response rate of the knowledge section was 73%, which was comparatively lower than similar studies in the region. The majority of participants were optimistic about the successful control of COVID-19 in Pakistan, and following the instructions issued by the government of Pakistan. However, a bulk of participants showed skepticism and no trust in the health facilities of hospitals in Pakistan. In addition, a low knowledge score was found to be significantly associated with low confidence in successful control of COVID-19, and socially undesirable practices. The study presented a methodological gap as it used cross-sectional study design while our study will utilize a desktop review methodology.

Bakaeen, Masri, AlTarawneh, Garcia, AlHadidi, Khamis, Hamdan, Baqain (2020), conducted a study on dentists’ knowledge, attitudes, and professional behaviour toward the COVID-19 pandemic: A multisite survey of dentists’ perspectives. A questionnaire was circulated via e-mail and social media platforms to dentists in North America, Europe, Eastern Mediterranean, and Western Pacific regions. It covered demographic characteristics and questions about the COVID-19 outbreak related to dentists’ levels of comfort for preventive and safety measures, provision of treatment, effect on work, and financial implications. Responses were tabulated and analyzed by

means of χ^2 or Fisher exact test. Mann-Whitney and Kruskal-Wallis tests were used to compare means. $P < .05$ was considered significant. A total of 1,251 dentists responded. General dentists represented 63.9% of the respondents and 62.5% worked in private practice. The global score for level of comfort with the preventive measures and provisions of treatment during the COVID-19 pandemic was low (14 of 30), and differences between regions were significant ($P < .01$); dentists working in private practice and general dental practitioners were less comfortable ($P < .01$). The study presented a contextual gap as if focused on dentists' knowledge, attitudes, and professional behavior toward the COVID-19 pandemic: A multisite survey of dentists' perspectives while our study will focus on focus on knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears.

Kumar, Pinky, and Nurudden (2021), conducted a study on the level of knowledge, attitudes and practices towards COVID-19 guidelines among the students in Bangladesh. In achieving this objective, this paper used primary data collected from 1822 students wherein three different Likert scales and a one-way ANOVA test were used to assess knowledge, attitudes, and practices (KAP) scores as well as mean differences with respect to different variables. This research reveals that the majority of students had a higher level of knowledge and positive attitudes towards the COVID-19 guidelines. Contrarily, only 0.22 percent of students showed a strong compliance towards COVID-19 guidelines while the majority of students (60.54 percent) had rather poor adherence which is an alarming finding. Hence, reopening the educational institutions in Bangladesh amid the second wave of the pandemic was not advisable. Nevertheless, reinforcing the preventive measures through campaigns or online discussion was crucial to persuade people to follow the preventive guidelines. In addition to this, urgent vaccination of all students and teachers was highly recommended to contain this global disease in an attempt to reopen the on-campus education system as soon as possible. The study presented a conceptual gap as if focused on the level of knowledge, attitudes and practices towards COVID-19 guidelines among the students in Bangladesh. Our study focuses on knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears.

Maria de Fátima Carvalho Alves et al. (2021), conducted a study on knowledge, attitudes and practices towards COVID-19: A cross-sectional study in the resident cape-Verdean population. The study adopted a cross-sectional study among 1996 participants aged 16 years old and above. Data collected from April 5 to April 12, 2020, via an online self-reporting questionnaire adapted from a Chinese study. Descriptive statistics, chi-square tests, simple and multiple linear regression analyses were performed to determine factors associated with knowledge, attitudes, and practices towards COVID-19. Results indicated that the overall correct answer rate related to the knowledge about COVID-19 was 82% ($9/11 * 100$), 1970 (98.70%) of the participants declared they had stayed at home in recent days, 1926 (96.49%) had not attended parties, funerals or crowded places and 1860 (93.19%) confirmed changes in daily routines due to COVID-19. The majority of the participants, 1797 (90.26%), preferred receiving information about COVID-19 in Portuguese and trusted information transmitted by health professionals. Furthermore, television, radio, and newspapers were the preferred means of transmitting information about COVID-19. Participants' knowledge influenced COVID-19 prevention and control practices ($\rho = 0.119$; $p = 0.000$). The study presented a geographical gap as it was conducted in cape-Verdean

population. Our study reviews knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears.

METHODOLOGY

The study adopted a desktop literature review method (desk study). This involved an in-depth review of studies related to knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears. Three sorting stages were implemented on the subject under study in order to determine the viability of the subject for research. This is the first stage that comprised the initial identification of all articles that were based on knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears. The search was done generally by searching the articles in the article title, abstract, keywords. A second search involved fully available publications on the subject on knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears. The third step involved the selection of fully accessible publications. Reduction of the literature to only fully accessible publications yielded specificity and allowed the researchers to focus on the articles that related to knowledge, attitudes and practices of tailors towards the business of Covid masks and protective gears which were split into top key words. After an in-depth search into the top key words (knowledge, attitudes, practices, tailors, business, Covid masks, protective gears), the researchers arrived at five (5) articles that were suitable for analysis.

The 5 articles were findings from Yapi, Houngbedji, N'guessan, Dindé, Sanhoun, Amin, & Bonfoh, (2021), conducted a study on knowledge, attitudes, and practices (KAP) Regarding the COVID-19 outbreak in Côte d'Ivoire: Understanding the Non-Compliance of Populations with Non-Pharmaceutical Interventions and found out that individuals who believed COVID-19 was a disease caused by a pathogen and the well-educated were likely to comply with preventive measures.

Muhammad and Younas (2021), conducted a study to examine the knowledge, attitudes, and practices of university students and graduates in Pakistan regarding COVID-19 and found out that the overall correct response rate of the knowledge section was 73%, which was comparatively lower than similar studies in the region.

Bakaeen, Masri, AlTarawneh, Garcia, AlHadidi, Khamis, Hamdan, Baqain (2020), conducted a study on dentists' knowledge, attitudes, and professional behaviour toward the COVID-19 pandemic. The study found out that the global score for level of comfort with the preventive measures and provisions of treatment during the COVID-19 pandemic was low (14 of 30), and differences between regions were significant ($P < .01$); dentists working in private practice and general dental practitioners were less comfortable ($P < .01$).

Kumar, Pinky, and Nurudden (2021), conducted a study on the level of knowledge, attitudes and practices towards COVID-19 guidelines among the students in Bangladesh and found out that nevertheless, reinforcing the preventive measures through campaigns or online discussion is crucial to persuade people to follow the preventive guidelines. In addition to this, urgent vaccination of all students and teachers is highly recommended to contain this global disease in an attempt to reopen the on-campus education system as soon as possible.

Maria de Fátima Carvalho Alves et al. (2021), conducted a study on knowledge, attitudes and practices towards COVID-19: A cross-sectional study in the resident cape-Verdean population. The study found out that participants' knowledge influenced COVID-19 prevention and control practices ($\rho = 0.119$; $p = 0.000$).

CONCLUSION AND RECOMMENDATION

Conclusion

The study findings demonstrate a high level of awareness of COVID-19 among the tailors and general civilians who frequently updated themselves on the pandemic through several information channels. The pandemic disease, was broadcasted daily through all media, including social media and mainstream media (such as public television channels and radio). The study showed that the tailors also had heard about the need for more masks primarily through national TV channels which represented the primary source of information for remote communities in particular, and social media. Since the outbreak, many tailors have taken on the opportunity to make custom-made masks.

The study also concluded that despite poor socioeconomic conditions, the level of knowledge related to COVID-19 and the trust of people in the government and the health system are more likely to influence health-related practices such as self-reporting, self-quarantine, physical distancing, and the use of a face mask.

This study showed that people were aware of the ongoing COVID-19 pandemic and the preventive measures reported in the media. Though they acknowledged these measures, opinions on how they could prevent the spread of the virus varied. The study also revealed that compliance with preventive measures was rather related to people's perceptions and beliefs about COVID-19, the nature of preventive measures, and their need to maintain their livelihoods.

Recommendations

The study findings showed that the resident population had a good level of knowledge about COVID-19; however, there is a need to use more effective strategies to improve attitudes and practices towards COVID-19 to attain better results in controlling the pandemic. The results suggest an urgent need for health education programs to hold optimistic attitudes and rebuilding the trust of the general public in health facilities in local hospitals to avoid the possible next wave of COVID-19. The study also recommends that the government together with international donors should support local tailors by giving them funds to buy material they can use to make more protective gears.

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