Research Paper

Hand hygiene and safety behaviours at shopping centres in COVID-19: an observation in Wa township in Ghana

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ABSTRACT

This study observed hand hygiene and safety behaviours of shoppers and shop keepers with respect to COVID-19 safety protocols in shopping centres in Wa, a business centre in North-western Ghana. Based on the theory of planned behaviour, the behaviours of 751 customers of 50 shops with handwashing facilities were observed from April to June 2020. It was observed that adherence to COVID-19 safety protocols at shopping centres was very poor. Although the shops observed provided handwashing facilities, 91.3% of the customers did not practise handwashing before entering the shops. Also, 84.2% of them did not wear mouth-and-nose masks during shopping. Similarly, for 78% of the shops observed, no shop attendant wore a mask. Despite the provision of handwashing facilities and widespread advocacy to minimise COVID-19 infections, the citizenry, especially the youth, demonstrated a poor attitude towards safety measures. Non-adherence to COVID-19 protocols was higher in shops where there was no pressure to conform to the protocols. The findings, amidst the increasing number of infections, suggest that attitude and perceived behavioural control are critical to the fight against the COVID-19 pandemic and, as such, could be good entry points for behavioural interventions.

Key words | COVID-19, handwashing practices, mouth-and-nose masks, shopping centres, Wa – Ghana

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HIGHLIGHTS

- There is adequate access to water and hygiene services at shopping centres.
- Handwashing and hygiene practices during shopping are generally poor.
- Shop attendants and customers stand the risk of infecting one another.
- The youth generally do not practise handwashing or wearing of mouth-and-nose masks.
- Attitude and perceived behavioural control are critical to the fight against the COVID-19.

Corrected Proof

2   N. Fielmua *et al.* | Hand hygiene and safety behaviours at shopping centres in COVID-19   **Journal of Water, Sanitation and Hygiene for Development** | in press | 2021

INTRODUCTION

The Coronavirus disease (COVID-19) has become a global health and humanitarian crisis since December 2019. The World Health Organization (WHO) anticipated a rapid human to human transmission based on its mode of infection (Lee 2020). According to the WHO (2020), the virus is transmitted through close contact and droplets. As such, the WHO came out with health protocols as preventive and mitigation measures which include the following: performing hand hygiene frequently with an alcohol-based hand sanitiser; regular handwashing with soap under running water; avoiding touching one's eyes, nose, and mouth; wearing a mouth-and-nose mask; and maintaining social and physical distance (WHO 2020). These measures have become national response strategies in many countries (Bedford *et al.* 2020), including Ghana. Within 3 months of the outbreak of COVID-19, the number of cases outside China had increased drastically, affecting about 143 countries. Based on the 'alarming levels of spread and severity, and the alarming levels of inaction', the WHO declared the situation as a pandemic on 11 March 2020 (Bedford *et al.* 2020, p. 1). The WHO justified the decision by indicating that the greatest concern was the possibility of the virus spreading to countries with weak health systems, especially in Africa (Kapata *et al.* 2020). With increasing cases and mortality of COVID-19, there are concerns about its health consequences in low- and middle-income countries where health systems are weak – with weak health infrastructure, limited laboratory resources, and untimely notification of infectious disease (Rajakaruna *et al.* 2017; Kapata *et al.* 2020; Lee 2020).

Furthermore, the difficulty in building up health protection infrastructure, skills, and workforce rapidly makes the risk of the COVID-19 in developing countries very high, with possibly fast increasing infections (Lee 2020). Ghana recorded the first two cases of COVID-19 on 12 March 2020 in Accra, while the Wa municipality in the Upper West Region recorded its first case on 27 March 2020 (GBC Ghana 2020; Ghana Health Service 2020a, 2020b). By 11 April 2020 (just 1 month after the first reported case in the country), the case count shot up to 566, with four recoveries and eight deaths. By 12 June, the number of infected persons increased over 20-fold, reaching 11,717, out of which 4,410 persons recovered and 54 deaths were recorded (Ghana Health Service 2020a, 2020b). Based on these figures, Ghana remained the second most impacted country in the West and Central African regions after Nigeria, and ranked third in the number of cumulative cases in the WHO Africa region, following South Africa and Nigeria (UNICEF 2020).

Globally, epidemiological records show that transmission of the disease was established among people who attended the same social events or were in circumscribed areas such as offices or cruise ships (Bedford *et al.* 2020). This means that public places, including shopping centres, pose a high risk of infections of COVID-19. Indeed, viruses are known to spread in shopping malls through customer interactions, surfaces in malls, and the sharing of the same public space (Cai *et al.* 2020). In Ghana, access to items in shops is mostly through shop attendants employed for such purposes. This mode of accessing items in shops involves close face-to-face interactions between customers and shop attendants. In this COVID-19 pandemic however, it is advisable to limit person-to-person interactions, through social distancing and physical distancing in public gatherings, in order to reduce the rate of transmission of the virus (Musinguzi & Asamoah 2020; Nicola *et al.* 2020). The desire of individuals to minimise their presence in public places coupled with increased panic have increased the need to stock basic needs, resulting in a massive rush to shopping centres and malls. This makes the risk of contracting the disease rather high. In an effort to contain the disease, African countries, including Ghana, have trained health personnel; procured personal protection equipment; and identified isolation and quarantine centres, and provided laboratory facilities for testing (Kapata *et al.* 2020). Beyond these measures, the behaviour and cooperation of the citizenry, especially in following safety protocols, are significant to the fight against the COVID-19. This makes it necessary to observe societal behaviour in public places amidst the rising cases of COVID-19. This study was thus designed to observe the availability of water and hygiene services and practices at shopping centres within the Wa township in the Upper West Region of Ghana.

Corrected Proof

3   N. Fielmua *et al.* | Hand hygiene and safety behaviours at shopping centres in COVID-19   **Journal of Water, Sanitation and Hygiene for Development** | in press | 2021

THEORETICAL PERSPECTIVE OF COVID-19 AND WATER AND HYGIENE BEHAVIOURS

The COVID-19 protocols relate to social and behavioural issues and, as such, a social cognition theory that is ingrained with social factors and best explains health behaviours, particularly the COVID-19 water and hygiene behaviours, is appropriate. Based on the protocol, the study was approached from the Theory of Planned Behaviour perspective. In this theory, individuals' intention to perform the target behaviour is a function of three constructs that summarise sets of beliefs regarding the future behaviour: (i) attitude (beliefs that engaging in the behaviour will have advantageous/positive or disadvantageous/negative consequences); (ii) subjective norm (perception of whether others think one should engage in a behaviour or how one feels social pressure to perform a behaviour); and (iii) perceived behavioural control (beliefs in the capacity to perform the behaviour and to overcome barriers to the behaviour) (Ajzen 1991; Hagger *et al.* 2020). All that the theory stipulates is that 'people's attitudes, subjective norms and perceptions of control follow reasonably and consistently from their beliefs, no matter how the beliefs were formed, and that in this way, they influence intentions and behaviour' (Fishbein & Ajzen 2010, p. 3). Intentions are assumed to capture the motivational factors that influence a behaviour; they are indications of how hard people are willing to try, and how much of an effort they are planning to exert, in order to perform the behaviour (Ajzen 1991).

Every behaviour will attract reactions from people, depending on the consequences (positive or negative) of the behaviour, and the behaviour can reveal unanticipated difficulties or enablers. This feedback can change a person's behavioural and normative beliefs and has the potential of shaping future intentions and actions (Fishbein & Ajzen 2010). As such, one strength of the theory is its ability to give a good prediction of intentions from attitude, subjective norms, and perceived behavioural control (Fishbein & Ajzen 2010). For instance, in a survey of Australian and U.S. residents to determine social distancing behaviour, and the processes involved, in the context of the COVID-19 pandemic, it was found that subjective norms and perceived behaviour control were consistent predictors of intentions and consequently social distancing behaviours

(Hagger *et al.* 2020). Again, using the theory of planned behaviour, Ahmad *et al.* (2020) found that people's risk perception (severity, susceptibility, and the fatality of the COVID-19 infection) has a positive contribution to enhancing their intention to accept and practise protection measures. Although the Theory of Planned Behaviour (TPB) is not a theory of behaviour change (Ajzen 2011), and cannot explain the variances in intentions (Fishbein & Ajzen 2010), it can serve as a framework that triggers interventions that seek to change behaviour.

STUDY AREA

This study was conducted in Ghana, specifically in Wa, the regional capital of the Upper West Region. The Region is one of the 16 political administrative regions of Ghana with a projected population of 801,985 and the study area. Wa has a population of 132,487 (GSS UWR 2020). Specifically, this study was conducted within the Wa township, particularly within the central business district (CBD). The township lies approximately within latitudes 1°40′N to 2°45′N and longitudes 9°32′W to 10°20′W on a landmass of approximately 579.86 km^2 (Wa Municipal Assembly 2018), as shown in Figure 1.

Wa is urbanising quickly with growing socioeconomic activities. The town provides the highest level of services in the Region, in the area of transportation, health, commerce, finance, education, and justice and peace delivery. There are diverse commercial activities in the township, with trading being the main activity. Business activities are expanding rapidly, facilitated by financial institutions in the town. With increasing economic activities and influx of people from neighbouring communities as well as other parts of the Region to perform socioeconomic functions, Wa township (central business district) is most appropriate for the study of people's adherence to COVID-19 protocols.

METHODOLOGY

The study adopted basically a quantitative behavioural observation approach in its design (Suen & Ary 2014). This approach is considered appropriate for behavioural research
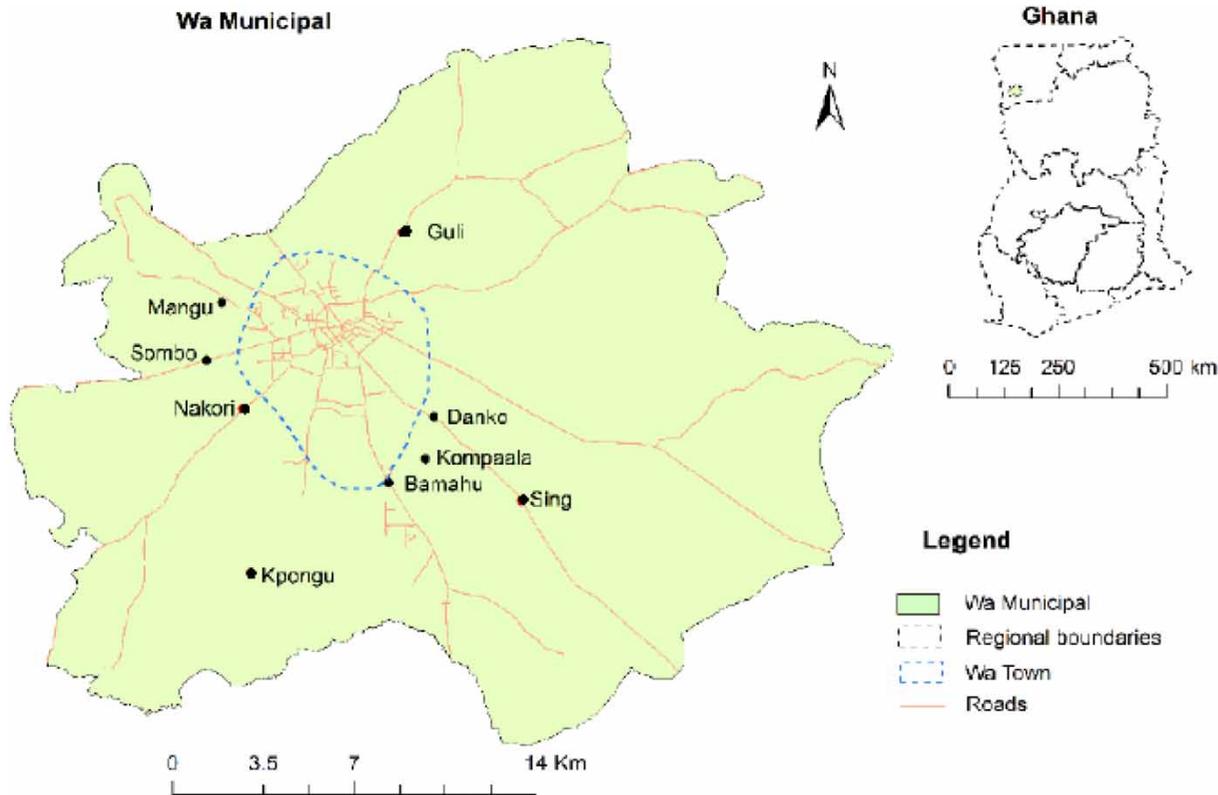
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4   N. Fielmua *et al.* | Hand hygiene and safety behaviours at shopping centres in COVID-19   **Journal of Water, Sanitation and Hygiene for Development** | in press | 2021

Figure 1 | Map of Wa township.

to minimise obtrusiveness in the data collection process (Suen & Ary 2014). This approach was appropriate for the study as it provided the opportunity for understanding social behaviours at shops in the midst of COVID-19. The target population for the study was shop owners and customers who patronised these shops. These served as the sampling units and the unit of analysis. Data collection was based on observation using a questionnaire to collect data on the shop owners and customers' adherence to the COVID-19 protocols. Observations were carried out from 15 April to 15 June 2020 covering part of the period that the Government of Ghana had locked down some parts of the country (from 30 March 2020 to 20 April 2020) and limited the number of public gatherings to 25 people. As part of adhering to the COVID-19 protocols, the study adopted observation instead of face-to-face interaction with customers. The observation methods ensured that the physical distancing protocol was adhered to during the data collection. The observations of customers at shopping centres lasted for an average of 55.52 minutes per shop. Data from observations were supplemented by follow-up interviews with only one shop attendant in each of the 50 shops observed. The interviews were to probe some of the observations made by the researchers and to also know the mode of payment for items in the shops. Interviews only proceeded when both the interviewer and the interviewee wore mouth-and-nose masks. This practice was to minimise the risk of infection.

A total of 50 shops and 751 customers (approximately 15 customers per shop) were observed for this study. The choice of shops as the observation points is because they are public places where people converge on a daily basis to purchase basic necessities, despite the COVID-19 pandemic. Also, shops were purposively selected for the observation; that is, only shops that have WASH facilities around the entrance were selected for observation. Shops were observed on the type of water and hygiene facilities provided such as handwashing and/or cleansing facilities (water, soap, tissue, and sanitisers). The observations also covered the manner in which subsequent waste generated

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5 N. Fielmua *et al.* │ Hand hygiene and safety behaviours at shopping centres in COVID-19 │ Journal of Water, Sanitation and Hygiene for Development │ in press │ 2021

was disposed of. Further, customers to these shops were observed on their use of the water and hygiene services provided by the shopping centres and the adherence to the COVID-19 protocols of wearing of a mouth-and-nose mask and keeping to physical distancing.

Research involving humans requires ethical morality on the part of the researcher, to seek informed consent, and also protect the image and integrity of participants of the research (Creswell & Clark 2011; Gray 2013). In other words, the research should not seek to jeopardise the participants. However, in order to avoid a change of behaviour by research participants, the researchers did not seek their consent to be observed. Again, the observers stayed at a distance of between 20 and 40 m away from the location of the WASH facility. This was to avoid any suspicion of customers being observed. Similarly, the shop attendants and customers within the shops were observed without their notice, and this was to establish WASH practices within the shop. Following an observation, the shop attendants were then interviewed upon their consent, and given the assurance that neither their shops' location nor names will appear in the report. The shop attendants were further assured that the study was not commissioned by the government for prosecution purposes. Data were analysed using SPSS version 21. The software was used to clean the data to eliminate outliers and correct omissions. Descriptive statistics such as frequencies, percentages, and cross-tabulations on participants' background and their adherence to COVID-19 protocols were then generated for synthesis.

Interviews were transcribed and used to triangulate data from observations.

RESULTS AND DISCUSSION

This section presents the results and discussions. The main themes presented and discussed in this section are as follows: the nature of shops and wash facilities; the background of the customers; water and hygiene services at shops; and water and hygiene practices at shops.

Nature of shops and wash facilities

In this study, shops observed traded in general provisions, pharmaceuticals, auto-spare parts, clothing and textiles, electronics, cosmetics, building materials, and food provisions. The shops visited in this survey are retail outlets. A retail outlet normally stores 'retail goods which are sold to the general public from the premises, without prior appointment' (Guy 1998, p. 256). Table 1 presents the numbers of the types of shops and access to items in the shop.

Out of the 50 shops observed, 27 shops (representing 54%) were into general provisions. Out of these 27 shops, 63% of them have items in the shops that can only be accessed with the help of shop attendants (see Table 1). It can be deduced from Table 1 that self-serving is the least means of access to items in shops compared with the other two options. This increases the frequency of exchange

Table 1 │ Description of shops and access to items in the shops

| Description of shop services | Access to items in the shop | | | |
	Customers (self-serving), *N* (%)	Only shop attendant has access, *N* (%)	Both customers and shop attendant, *N* (%)	Total, *N* (%)
General provisions	1 (3.7%)	9 (33.3%)	17 (63.0%)	27 (100.0%)
Clothing and textile	0 (0.0%)	0 (0.0%)	1 (100.0%)	1 (100.0%)
Building materials	0 (0.0%)	0 (0.0%)	3 (100%)	3 (100%)
Pharmaceuticals	0 (0.0%)	3 (100.0%)	0 (0.0%)	3 (100.0%)
Motor spare parts	0 (0.0%)	3 (75.0%)	1 (25.0%)	4 (100.0%)
Phone, electronics	0 (0.0%)	4 (66.7%)	2 (33.3%)	6 (100.0%)
Cosmetics	0 (0.0%)	1 (25.0%)	3 (75.0%)	4 (100.0%)
Food provisions	0 (0.0%)	2 (100.0%)	0 (0.0%)	2 (100.0%)
Total	1 (2.0%)	22 (44.0%)	27 (54.0%)	50 (100.0%)

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6   N. Fielmua *et al.* | Hand hygiene and safety behaviours at shopping centres in COVID-19   **Journal of Water, Sanitation and Hygiene for Development** | in press | 2021

of items in the shops between shop attendants and customers, exposing both parties to the viral infection.

Background of the participants

Different people of different sexes and age groups visit shops on a daily basis to acquire basic necessities for their upkeep during the COVID-19 pandemic. Shopping centres are avenues where different people of different health conditions converge. As such, customers and shop attendants are strictly required to observe safety protocols to avoid contracting the virus and/or infecting others. It was established that the demographic characteristics of the participants point to the level of vulnerability and fatalities of different groups with the coronavirus pandemic (Dowd *et al.* 2020). According to Lippi *et al.* (2020), male sex, advanced age, and underlying disease conditions are the main factors that lead to mortality. This is consistent with findings that countries with youthful populations have low mortality rates of the COVID-19 (Dowd *et al.* 2020). Also, it was observed that 87% of coronavirus infected persons fell within the age range of 30–79 years, out of which 86% contracted the disease through exposure to affected persons (Wu & McGoogan 2020). These have implications for developing countries with less robust health systems. For example, families are close-knit and the presence of intergenerational interactions within families increases the risk of transmission of the virus from youth (mostly the interactive population with shopping centres) to adults and children who are less interactive with shopping centres (Arpino *et al.* 2020). In this study, two categories of participants were observed.

The first category was customers at shopping centres. They were categorised as adult (above 40 years), youth (18–40 years), and child (5–17 years). The basis for the categorisation is limited to observation of the customer since we could not verify their ages due to the nature of the research design. Out of the 751 customers observed, 502 (66.8%) were males and 249 (33.2%) were females. Out of the 502 males observed, 6.6% of them were adults; 79.1% were youth; and 14.3% of them were children. Also, 8.4% of the total females observed were adults. A majority (73.9%) of the females were youth and 17.7% of them were children. The results show that across all customer and sex categories, the majority of people who patronised shopping centres during the COVID-19 pandemic were youth.

The second category of participants was shop attendants who provided services to customers. This category of participants is expected to observe the COVID-19 safety protocols in their interactions with the public (customers) and in the handling of items in the shop. A total of 72 shop attendants were observed in 50 shops. Out of this total, 56% were males, while 44% were females. The mean number of attendants in a shop is 5.08, with a standard deviation of 5.492. The modal number of attendants is 2. About 58% of the shops had between 1 and 3 shop attendants.

Water and hygiene services at shops

The Veronica bucket is the most common facility used for handwashing in the township as 98% of the observed shops use it and only 2% of the shops use sanitiser only. 'Veronica Bucket' is a repurposed plastic receptacle with a tap at the base and wastewater collecting-bowl, used to facilitate handwashing in the absence of tap water (Pilling 2020). This local invention was engineered by Veronica Bekoe, a public health official from Ghana, and it is being adopted by other West African countries where running water is largely lacking (Pilling 2020). Most of the shops (88%) with Veronica buckets did not, however, provide tissue for hand drying. The Veronica bucket is good for handwashing practices because it prevents direct contact with the water, thus minimising potential contamination. Although the facility minimises contamination, the mode of discharging wastewater from washed hands can possibly expose people to contamination. As such, the observation also considered the mode of collecting wastewater from handwashing. It was observed that 68% of the shops placed an open container beneath the tap and the dirty water is collected in the container. When the container is full of the dirty water, a shop attendant pours the water in either an open gutter or any available open space. About 14% of the shops discharge the dirty water through a suck away. Some shops (12%) connected a tube to an outlet beneath the Veronica bucket and the dirty water is discharged through the tube into an open drain.

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7 | N. Fielmua *et al.* | Hand hygiene and safety behaviours at shopping centres in COVID-19 | Journal of Water, Sanitation and Hygiene for Development | in press | 2021

There is a high risk of transmitting COVID-19 through physical money. Given that paper currency and coins pose a potential public health risk (Angelakis *et al.* 2014), the WHO encouraged the use of e-wallets to minimise physical interaction with money (Aji *et al.* 2020; Kaur 2020). Our study, however, found that only 24% of the shops visited accept both an e-wallet and cash payment, while 76% do not accept e-wallet and, as such, customers are required to make physical money payment. This practice, coupled with the non-adherence of customers to handwashing before and after use of shops, exposes people to the risk of infection. Although shop attendants are exposed to different people with different health conditions, 78% of the shops observed have none of the staff wearing a mouth-and-nose mask. The use of personal protective equipment such as mouth-and-nose masks and hand gloves has been considered the safest means of reducing transmission of the virus (Rubio-Romero *et al.* 2020). Shop attendants are, therefore, required to adhere to these safety protocols in rendering services to customers. Cheng *et al.* (2020) say that masking is analogous to driving in which all other road users benefit from safe driving. This means that wearing a mask reduces one's chances of infection and equally reduces the chance of transmitting the virus, and the vulnerable particularly benefit. Wearing masks can only go so far as protecting vulnerable members of society (Kawachi 2020). Unfortunately, it was only in one shop that all the attendants were wearing masks. In all, only about 20% of the observed shops had some attendants wearing mouth-and-nose masks.

Water and hygiene practices at shops

Three main variables were observed about customers' water and hygiene practices at the shops, and these are handwashing at the entrance of the shop; the use of hand sanitiser at the entrance; and wearing of a mouth-and-nose mask.

Although shopping centres are places of public attraction, handwashing during the COVID-19 was generally low in these places within the Wa township. This study observed that 94% of the handwashing facilities around the shops were visible to all potential customers/entrants, yet handwashing practice was still low. As shown in Table 2, 91.3% of the customers did not wash before entering shops and the proportion is highest among children. It was observed that 81.5 and 77.8% of the adults did not wash hands and did not also wear mouth-and-nose masks, respectively. In terms of gender, there is no substantial difference in handwashing behaviour. Results from gender observations of customers revealed that only 8.8% of all males and 8.6% of all females practised handwashing before entering shops. While at most of the shops, handwashing was at the discretion of the customers, a few shops had to enforce the practice. According to the shop attendants, enforcement was necessary because some customers were unwilling to wash their hands before entry. At some of these shops, it was observed that some customers resisted attempts to enforce handwashing. The general attitude of customers to handwashing practices shows that strict control is necessary for success in containing the spread of the COVID-19. Despite the fact that very few

Table 2 | Observed COVID-19 protocol practices

Type of facility	Variable	Customer type (age category)			
		Adult, *N* (%)	Youth, *N* (%)	Child, *N* (%)	Total, *N* (%)
Shops with handwashing facility	Washed hands at the entrance	10 (18.5%)	48 (8.5%)	6 (5.3%)	64 (8.7%)
	Did not wash hands	44 (81.5%)	520 (91.5%)	108 (94.7%)	672 (91.3%)
	Total observants	54	568	114	736
Shops with sanitiser	Customer used sanitiser supplied by the shop	10 (76.9%)	30 (45.5%)	2 (18.2%)	42 (46.7%)
	Customer did not use sanitiser	3 (23.1%)	36 (54.5%)	9 (81.8%)	48 (53.3%)
	Total observants	13	66	11	90
Use of mouth-and-nose mask	Customer wore mouth-and-nose mask	12 (22.2%)	105 (18.1%)	2 (1.7%)	119 (15.8%)
	Customer did not wear mouth-and-nose mask	42 (77.8%)	476 (81.9%)	114 (98.3%)	632 (84.2%)
	Total observants	54	581	116	751

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8   N. Fielmua et al. | Hand hygiene and safety behaviours at shopping centres in COVID-19   Journal of Water, Sanitation and Hygiene for Development | in press | 2021

people practised handwashing, hand hygiene was still not guaranteed, as most people dried their hands on their clothes or vehicle dusters since 88% of shops did not provide hand tissues. The high cost of tissues was cited by a shop attendant as a reason for not providing the tissues at the handwashing facility. In terms of the use of hand sanitisers, the practice was also found to be very poor. Only 8.2% of all males and 6% of all females used hand sanitisers before entry into the shops.

The limited or lack of handwashing among children has been attributed to the lack of handwashing facilities (Lopez-Quintero et al. 2009). However, when handwashing facilities are available and the practice is minimal, the central problem is behaviour related. A cross-analysis of the use of sanitiser and handwashing practice further showed that 87.1% of the customers neither practised handwashing nor used hand sanitiser at the entrance. This particularly exposes other shop users to the risk of infection.

While others have established that the pandemic causes physical, emotional, and psychological distress (He & Harris 2020), the exhibited behaviour of participants in this study demonstrates that the majority of them remain untouched by the pandemic and do not take precautionary measures against infection. In a socio-cultural setting where the aged and the youth live together in shared houses and rooms, the behaviour of non-adherence to simple health safety protocols, and the seemingly unperturbed nature of people – majority youth – to a health pandemic, raise serious public health concerns. In a recent study of the COVID-19 pandemic, Kähler & Hain (2020) found that the mouth-and-nose mask is capable of containing the pandemic by protecting people in a particular vicinity from droplets infection. As such, the use of masks is highly recommended by governments and the WHO (Cheng et al. 2020; Kähler & Hain 2020; WHO 2020). Despite these calls, the observation at shopping centres showed that 84.2% of the customers entered shops without wearing masks and the proportion is higher (98.3%) among children.

Gender wise, there is no substantial difference between the male and female behavioural practice of wearing of mouth-and-nose masks. It was observed that 84.3% of all males and 83.9% of all females did not wear mouth-and-nose masks before entering shopping centres, suggesting that the desire to perform a behaviour (masking) is regardless of gender. The failure to comply with basic safety protocols increases the potential to infect and to be infected (Huynh 2020). The high proportion of non-compliance to the COVID-19 protocols is due to the lack of strict enforcement of the protocol at the entrance of shopping centres. The posting of bills such as 'no mask, no entry', to warn customers is not enough to increase customers' desire to perform a behaviour. Strict enforcement of the protocol was observed in only 3 out of the 50 shops, where customers were required to wear mouth-and-nose masks and wash their hands at the entrance before entry. During data collection in one of the shops where the wearing of a mask and handwashing are compulsory, a customer was seen arguing with a shop attendant. The customer came to the shop without a mask and was denied entry into the shop. The customer went away and returned with a handkerchief tied over the nose and mouth to mimic a mask. The customer was again denied entry, resulting in an argument. Although the shop had provided mouth-and-nose masks at the entrance for sale, the aggrieved customer noted that he did not have money to buy the mask. Observing the confrontation between the customer and the shop keeper, one of the researchers gave the aggrieved customer money to enable him to acquire the mask. Surprisingly, the customer walked away with the money, telling the researcher that he would rather use the money to buy food. In this case, the customer was simply not ready to adhere to the safety protocols. Therefore, in addition to attitude, subjective norm, and perceived behaviour control, the desire to perform a behaviour (wearing of a mouth-and-nose mask) may be influenced by economic access to a mouth-and-nose mask. While financial inability is a barrier to access to a mouth-and-nose mask, there are people who do not attach importance to these health protocols, and as such do not intend to observe them, regardless of access to facilities and guidelines.

Although social and physical distancing is recommended as a strategy to minimise infection (WHO 2020), 82% of the shops observed did not practise any form of physical distancing. Only 16% practised physical distancing. Indeed, some of the shops in which physical distancing was practised had put in place special floor signs and ropes to ensure or compel adherence to a physical

Corrected Proof

9   N. Fielmua *et al.* | Hand hygiene and safety behaviours at shopping centres in COVID-19   Journal of Water, Sanitation and Hygiene for Development | in press | 2021

distancing between customers. It was observed that, notwithstanding these measures, some customers still ignored the signs, and crowded up, especially, at the point of payments for services. This shows that left to individual personal discretion, most customers would not respect these health–safety protocols. A cross-tabulation between shop attendants who wear nose masks and the practice of physical distancing within the shops showed that 80% of the shops that do not practise physical distancing had no attendants wearing a mouth-and-nose mask. Physical distancing is a behaviour in minimising COVID-19 (Hagger *et al.* 2020). But the poor attitude of customers and shop attendants towards practising physical distancing predispose both customers and shop attendants to the virus, increasing the risk of infection to the wider public. Despite the presence of COVID-19 and the advocacy for handwashing and maintaining social and physical distance as the effective measures to minimise the spread, these practices remain poor among the citizenry in the study area. It is, thus, not practically surprising that within a period of 8 months, the number of infections in Ghana increased substantially, from two cases on 12 March 2020, to 50,376, by 13 November 2020, with 323 recorded deaths (Ghana Health Service 2020a, 2020b). Ghanaians, therefore, miss the opportunity to use the COVID-19 pandemic as a hygiene behaviour change agent. This is because when an individual has a strong intention to perform a behaviour, it is more likely that the individual will perform the behaviour (Ajzen 1991). Therefore, once customers have an intention to wash hands and wear mouth-and-nose masks, they will be committed to putting in measures to perform the function of handwashing and wearing of mouth-and-nose masks.

CONCLUSION

This study sought to observe customers' and shop attendants' behaviour and practices during the COVID-19 pandemic. Using the theory of planned behaviour, attitude was assessed in relation to performing behaviours such as practising physical distancing, washing hands without compulsion, and wearing of mouth-and-nose masks. Generally, there is a poor attitude towards the COVID-19 protocol practices among youths and children as compared with adults. Due to the nature of the study (observation of participants without interviewing them), this study failed to explain the link between intention and behaviour from the customers. The findings of this study amidst the increasing number of infections suggest that attitude and perceived behavioural control are critical to the fight against the COVID-19 pandemic. This is because in shops where customers had control over whether to practise the COVID-19 protocols or not, there was generally low participation in handwashing or use of sanitisers and wearing of a mouth-and-nose mask. Notwithstanding that this study could not explain a link between intention and behaviour, due to the nature of the study design – mostly observational – the findings largely show that attitude and perceived behaviour control influence behaviour of customers and shop attendants in not adhering to the handwashing and wearing of masks protocols. Therefore, the two constructs could be good entry points for behavioural interventions aimed at promoting handwashing and wearing of mouth-and-nose masks. We, therefore, recommend that critical and comprehensive health-related behavioural change strategies as well as public health response plans, especially in public places, be put in place even when there is no looming outbreak of disease. This will put governments in a better position to effectively manage health situations in the event of any outbreak.

DATA AVAILABILITY STATEMENT

All relevant data are included in the paper or its Supplementary Information.

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First received 20 November 2020; accepted in revised form 3 March 2021. Available online 16 March 2021