Short Communication

Pre-symptomatic and asymptomatic COVID-19 cases in Nigeria amidst prevailing socio-cultural beliefs and practices: Implication for COVID-19 transmission and way forward

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Abstract

Nigeria is the most populous country in Africa with diverse range of cultural and religious beliefs and practices vis-à-vis health seeking behaviour. The country is currently one of the nations in the African region that is most affected by the COVID-19 pandemic. With the active outbreak of COVID-19 in the country, this paper discussed how key socio-cultural beliefs and health behaviour coupled with pre-symptomatic and asymptomatic clinical presentation of COVID-19 cases could foster the spread of the disease and recommendations for control.

Introduction

COVID-19, a viral disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has spread rapidly over multiple countries in all the continents of the world since the first localized outbreak in China in December, 2019 with a resultant considerable impact on global morbidity and mortality [1]. Currently, Nigeria ranked second among the countries within the African region with ongoing transmission of COVID-19 disease [2]. As at July 31st, 2020, Nigeria has recorded a total of 43, 151 confirmed cases and 879 deaths in all 36 states and Federal Capital Territory since the first case was confirmed in the country on February 27, 2020 [3].

The COVID-19 outbreak which has been declared as a public health emergency of international concern by the World Health Organization (WHO) is exponentially sweeping across the world and triggering chaos, fear, anxiety and stress in countries [4-7]. The pandemic has disrupted daily routine lifestyles and business, stock market and global educational system. Similarly, the consequences of the COVID-19 pandemic in Nigeria have resulted in economic lockdown of major cities, total shutdown of the educational system across the country and economic and physical hardship among the populace [4,8].

The incubation period for COVID-19, which is the time between exposure to the virus and onset of symptom(s), is

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on average 5-6 days but can be up to 14 days [9]. During this period, also known as the pre-symptomatic period, COVID-19 transmission has been documented through contact tracing efforts and enhanced investigation of clusters of confirmed cases [10-15]. Data suggesting that some people can test positive for COVID-19 from 1-3 days before they develop symptoms also supports pre-symptomatic transmission of COVID-19 [14,16]. Given this background, it is important to note that pre-symptomatic cases, that are persons who may not have symptoms at the early stage of the illness but who will later develop symptoms, can transmit the virus before significant symptoms develop via infectious droplets [2,14].

Similarly, preliminary findings from the field are suggestive that asymptomatic cases, defined as persons with COVID-19 who do not have symptoms and never develops symptoms, have the capacity to infect others within close contact [17,18].

The pre-symptomatic and asymptomatic COVID-19 cases are active silent carriers of the virus who could infect other persons they come in close contact with unknowingly resulting in super-spreading of the disease where a single patient could infect a disproportionate number of contacts and likely contribute to the speed and degree of the outbreak [14,19].

Epidemiological review of the COVID-19 outbreak in Nigeria has shown laboratory-confirmed cases that are either pre-symptomatic or asymptomatic [20].

Socio-cultural beliefs/practices and health seeking behaviour in Nigeria: key concerns

Nigeria, a country made up of people from different ethnic groups, has more than 250 ethnic groups with different cultural and religious beliefs. These beliefs are governed by societal norms based on age, gender, religion, social class that could influence the perception, attitudes and behaviour of individuals towards disease existence, risk perception, etiology, severity and treatment [21,22].

As in many other developing countries, some ethnic groups in Nigeria have continued to link the etiology of diseases with spiritual or supernatural and traditional concepts despite medical advances which have led to improved understanding of the aetiology of diseases [22,23]. A typical example is the cultural belief among some ethnic groups that illnesses are as a result of the direct actions of supernatural entities, such as gods, evil or ancestral spirits and thus demands spiritual and traditional solution [23].

Furthermore, as a result of the cultural and religious beliefs in the Nigerian context, a lot of people are optimistic about their health and hence perceive themselves as having a low risk of falling ill [18]. The health belief model however predicts that individuals with low self-perceived risk of becoming sick are more likely to engage in unhealthy or risky behaviours [24].

Another socio-cultural practice in the country is the preference for non-orthodox care, such as visiting traditional healers and taking herbal concoctions, when ill because of the belief that traditional healers are easily accessible compared to visiting a medical personnel in a hospital; and also because of the belief that herbal remedies are readily available, less expensive, more efficient and with less adverse effect compared with orthodox drugs. Other socio-cultural practices in Nigeria include engagement in mass religious gatherings due to the belief that healing and good health depends on the intervention of the supreme God as well as engagement in traditional customs, such as unsafe funerals/burials involving direct contact with body fluids of the dead due to the belief that the dead persons have to be well respected in order to be at peace with them [23,25].

Implication for COVID-19 transmission

In view of the presence of pre-symptomatic and asymptomatic COVID-19 cases, the continued existence of these cultural and religious beliefs and practices outlined above has implications for COVID-19 transmission.

Poor perceived severity of the disease and low self-perceived risk

Anecdotal evidence suggests that some Nigerians without confirmed COVID-19 still perceive the disease as "not severe" or "not real". This perception is further fuelled by the number of persons confirmed as COVID-19 cases without symptoms [26]. These pre-symptomatic and asymptomatic COVID-19 cases do not believe that COVID-19 is real because they do not have symptoms. This has implication for COVID-19 transmission as the probability of adherence to COVID-19 public health preventive measures (such as good hand hygiene practices, good cough etiquette, wearing of face mask in public places, physical distancing and avoidance of crowded places) by persons who perceive COVID-19 as "not severe" or "not real" is very low [26].

Similarly, socio-cultural beliefs imbibe low self-perceived risk about COVID-19 in most people. This perception that they cannot be infected with COVID-19 increases their chances of exposure to the disease as they are also likely to ignore several public health preventive advisory and preventive measures outlined by the government and health officials.

In instances where individuals with poor perceived severity of COVID-19 or low self-perceived risk or both have suboptimal compliance to public health preventive advisory and preventive measures, the risk of been infected by unidentified or identified pre-symptomatic or asymptomatic COVID-19 cases is very high. This is particularly worse in crowded environments like social gatherings, markets, religious gatherings and so on, where intense community transmission of the disease can occur.

Resistance to treatment in accordance to case management protocol

Several pre-symptomatic and asymptomatic confirmed cases resist isolation and treatment in the COVID-19 treatment facilities in several parts of Nigeria due to their belief and perception that only the sick, evidenced by manifestation of symptoms, are the ones who should be admitted in hospitals.

These cases do not see a need for the isolation because they believe they have no symptom or illness. Rather they may resort to self-medication or non-orthodox and traditional remedies, such as taking of herbs and visiting traditional healers, which have not been proven to be effective for the management of COVID-19, hence, leaving many of these cases as reservoir of the infection in the community.

Furthermore, resistance to treatment and case management could be heightened with the general information that the disease is novel and currently has no cure or vaccine for its prevention.

Lack of trust in government, health agencies/institution and health expert opinions

With the current absence of specific treatment regimen for asymptomatic and pre-symptomatic confirmed cases of COVID-19 from the scientific world, many are returning to their beliefs in traditional institutions and religion to seek succor. The result is a lack of trust in the words and works of government, her agencies, representatives and experts as the source of solution to the pandemic. This is then manifested as disregard for government directives and outright deliberate disobedience to experts' advice and guides on the containment of COVID-19 [27].

Similarly, in some instances, people could refuse to report contacts of confirmed cases of COVID-19 to local health authorities and health facilities because they are seen as government institutions which they do not trust [27]. Literature has however reported contacts of confirmed cases, found during contact tracing, who tested positive to COVID-19 [28]. Therefore, it is obvious that many of these unreported contacts are just asymptomatic and pre-symptomatic cases waiting to be discovered. By not reporting them, they are left in the chain of transmission of COVID-19 within the community, thereby resulting in the spread of the disease.

Recommendation

Because every region of Nigeria has its own multifaceted, culturally-specific context informing community perception, there is a need for the responses to be conducted in line with local realities, including culture and beliefs.

Hence, it is crucial that communities are engage in ways that reflects their shared beliefs and ideologies, and that approach should be reflected in planned behavioral change strategies. Furthermore, there is an urgent need to change the risk perception of majority of the populace on the COVID-19 disease. To do this, community engagement exercise needs to be strengthened. Opinion leaders such as influential religious leaders, traditional leaders and trade union leaders in whom most of the populace have more confidence, need to be brought on board to disseminate key message on COVID-19 preventive measures to the populace.

Also, public health authorities should substantially expand testing programs for COVID-19 to include persons who do not have symptom of COVID-19 and to isolate those who test positive using a strict enforcement protocol.

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