*Short Communication*

# Maslow's Theory of Needs, Human Behaviour, and COVID-19 Non-Compliance: A conceivable triad

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## ABSTRACT

This short communication will present an original conceptual review of Abraham Maslow's theory of human needs to rationalize public COVID-19 non-compliance behaviour. The coronavirus disease 2019 (COVID-19) emerged in Wuhan, China in 2019. Since then, it has spread to more than 200 countries and has been declared a global pandemic by the World Health Organization. The COVID-19 pandemic epitomizes a substantial worldwide health crisis, with global governments sanctioning COVID-19 safeguard measures; which required a significant change in civic behaviour from individuals and groups. However, non-compliance with safeguard measures, such as the movement control orders or "lockdown", social and physical distancing, hand-hygiene compliance, and the wearing of appropriate personal protective equipment, such as facemasks were widespread and prevailing. Identifying and understanding the structure of human needs is essential for the effective preparation and implementation of future COVID-19 feedback strategies. In order to increase civic compliance with COVID-19 pandemic safeguards, decreasing rule-breaking behaviours, and save lives, Abraham Maslow's theory of human needs could be used to explain community non-compliance behaviour. Maslow's theory of human needs also offers a framework that explains why human beings are motivated, how they thrive, and why they may become defiant with COVID19 security and protection guidelines which are implemented to safeguard community lives.

**Keywords:** behaviour; COVID-19 strategies, Maslow's Theory of Human Needs, non-compliance

## INTRODUCTION

In previous pandemics, non-compliance research has concentrated on proximal, concurrent relationships in explaining non-compliance with protective measures (Clark *et al*., 2020; Webster *et al*., 2020). For instance, individuals who perceive a high risk of contracting the virus are positive and search for additional facts, and they place their trust in the government agencies for the advocated safeguards These proactive individuals, also seem to experience a moral responsibility to conform and are therefore more likely to abide by preventive safety guidelines which have been recommended (Clark *et al*., 2020; Harper *et al*., 2020; Lammers *et al*., 2020; Webster *et al*., 2020). Yet, there are members in every community that has been recognized as being non-compliant, often defiant with regard to public health measures aimed at curbing the spread of COVID-19 (Cohen *et al*., 2020; Park *et al*., 2020; RoyChowdhury, 2020). Consequently, the possibility of spreading the virus is much higher (Cohen *et al*., 2020). This commentary will present a conceptual review of Abraham Maslow's theory of human needs to rationalize communal COVID-19 non-compliance behaviour. Identifying and understanding human needs is critical for defining future pandemic responses and recovery strategies, as with the COVID-19 virus. Socio-demographic features, such as age, gender and academic education, have been associated with an individual's compliance related to the implementation of the advocated protective pandemic processes. Yet, it is the subjective needs that often determine both individual behaviour and effective response levels. (Donahue *et al*, 2012). Maslow's hierarchy of needs is the focus of this short communication as it provides a framework for understanding these needs, the logic that impacts society in times of crisis, and what motivates us as human beings (Maslow, 1943).

# BACKGROUND

## Maslow's Hierarchy of Needs

Abraham Maslow was an American psychologist who contended that an individual's motivations were based on pursuing achievement and change in the course of individual growth (Maslow, 1943). Maslow's hierarchy of needs is a theory that healthcare professionals use as a resource, for understanding how human motivation can help people to thrive and advance. Maslow's theory states that basic needs must first be experienced before a human being can be moved forward to a level of self-actualization. He partitioned these motivations into a five-level pyramid known as Maslow's Hierarchy of Needs (Figure 1)
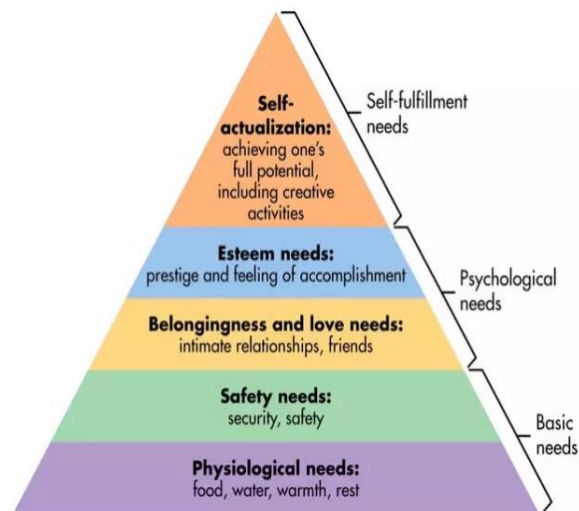


**Figure 1:** Maslow's Hierarchy of Needs

Maslow divided the five levels into two categories, which rationalized the first four as the deficiency needs and the fifth as the growth need. He stated that before a person can progress in the hierarchy, they must be fulfilled with the lower levels first. The five needs of the hierarchy consist of the pyramid base, which is the lowest level and is known as the "*physiological needs*", also known as the basic requirements for survival; these include air, food, water, warmth, rest and sleep. He proposed that without these basic requirements, the human body cannot function effectively physiologically. The second level, once the physiological needs are sustained, is the "*safety needs*", which require a need for protection and security, as they symbolize control and order in a person's life. This need can be achieved through social stability, financial security, order and emotional harmony. "*Belongingness and love*" is the third need level and refers to interpersonal relationships; such as being accepted, having friendships, giving and receiving affection, caring, intimacy and being loved. "*Esteem*" needs as the fourth level was categorized by Maslow into two specific classifications. The first was self-esteem, being able to accept achievements, attain independence and dignity, the second was prestige, which was the desire for respect or status from colleagues, contemporaries, friends and other members of society. The final level was "*Self-actualization*" which was the peak, and it was the highest level in Maslow's hierarchy of needs and signified that a person had achieved their goals and endeavours in life. This highest achievable need level, however, may be distinct and different for every individual, as it could involve, for example, an ambition to reach an academic status such as Ph.D., a creative achievement such as writing a book, as academic literature, or just to be a good mother or father. The basic physiological needs are the foundation of the hierarchy of needs, the more the physiological needs are satisfied, the more a person will attempt to satisfy their safety and security needs (Taormina and Gao, 2013). During the COVID-19 pandemic, the global government authorized movement control orders (MCO) and "*lockdowns*" and consequently disrupted the basic level of physiological needs. Needs such as access to food, water and rest, cascaded and affected the safety and security needs, such as access to employment and resources, which ultimately comprised the desire for people to accomplish the ensuing levels of needs related to social, esteem, and self-actualization.

## The COVID-19 pandemic

Coronaviruses are a category of viruses that can instigate a range of disorders such as the common cold, an upper respiratory tract infection (URTI), severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS). The novel coronavirus disease, 2019 (COVID-19) outbreak emerged in Wuhan, China, in December 2019 and in January 2020 was declared a public health emergency of international concern by the World Health Organization (WHO, 2020a). To date countries with confirmed cases are more than 200 and have been increasing (WHO, 2020a). Current trends have shown an exponential spread of infectious disease in global proportions, including the European Region, the United States and Asia.

The novel SARS-CoV-2 virus propelling the current pandemic exhibits exceptionally high person-to-person transmissibility, however, it is not dissimilar to the four "common cold" coronavirus variants that have affected the worldwide population for decades; causing billions of people to experience moderate respiratory tract maladies (Rapoza, 2020). This disease is highly infectious, and the severity of COVID-19 symptoms can range from being mild, moderate to critical. Some individuals may be asymptomatic, while other members in the community who are older or who have pre-existing comorbidities such as cardiovascular disorders, chronic pulmonary disease, diabetes mellitus, have a compromised immune system are potentially at greater risk (Chen *et al*, 2020; Epidemiology Working Group for NCIP Epidemic Response, Chinese Center for Disease Control and Prevention (2020). The clinical presentation of COVID-19 infection includes being asymptomatic to being symptomatic with a fever, dry cough, fatigue, myalgia, and dyspnea to severe pneumonia with acute respiratory distress syndrome (ARDS), metabolic acidosis, septic shock, disseminated intravascular coagulation-coagulopathy (DIC), and multi-organ failure, which can result in death (Chen *et al*, 2020; Epidemiology Working Group for NCIP Epidemic Response, Chinese Center for Disease Control and Prevention (2020); CDC, 2019a, CDC, 2019b, CDC, 2019c, CDC, 2019d, CDC, 2019e). During an infectious disease outbreak, such as the current COVID-19 pandemic, the WHO on January 30[th,] 2020, declared a public health emergency of international proportions and requested a communal effort from all nations to prevent the rapid spread of COVID-19 (WHO, 2020e). Public health organizations such as the Centre for Diseases and Control (CDC) in the United States of America, and the WHO, monitored the pandemic and issued recommendations and safeguards to prevent and manage the disease. Therefore, it was essential that every single member of the global community adhere to the WHO and the general safety guidelines to prevent the spread of the COVID-19 virus. To expedite the management of the COVID-19 pandemic there was an urgent need to realize the public's mindfulness of COVID-19 as a life-threatening disease and the importance of their compliance with MCO, lockdown and safety recommendations. However, people's adherence to the recommended lockdown and mandated control measures were repetitively disregarded or violated, which often became an issue of non-compliance or defiance.

### COVID-19 pandemic universal safety guidelines

In 1987 the CDC published a Universal Precautions Policy which established blood and body fluid procedures and safeguards for healthcare professionals, providers and their patients. In the context of the COVID-19 pandemic and the current global concerns, unprecedented governmental measures were implemented to control the rapid spread of the COVID-19 virus to reduce transmission from asymptomatic or pre-symptomatic people. The anxiety of the COVID-19 pandemic permeated all international communities with insidious consequences which affected the psychological, physical, social, economic, education and safety aspects related to a person's normal life. The COVID-19 pandemic required global societies to impose, and accept a "*new normal*" for their communities and citizens. This new "*normal*' required people to work from home if a parent; to multitask as both an employee and as a school teacher to home-school their children. In addition to simultaneously circling an exhausting new *"normal"* of using personal protective equipment [PPE], social and physical distancing and self-quarantining in an attempt to circumvent this deadly disease.

The World Health Organization (WH0, 2020a) also controls the spread of the COVID-19 infection. These strategies included universal precautions such as hand hygiene, avoiding the touching of the eyes, nose and mouth, maintaining social and physical distancing, the practice of respiratory etiquette, staying informed and following advice issued by healthcare professionals, and seeking prompt medical advice and treatment if becoming ill. These guidelines were endorsed, and reinforced by international governments, in addition to lockdown and an MCO, which included ending public congregations for educational and religious institutions, restaurants, clubs, cinemas, theatres, parks, and public transportation systems. People were expected to remain inside their homes, support social distancing and adopt universal precautionary measures. Nationwide restrictions on freedom of movement ("*stay-at-home" orders, or "lockdowns*") were imposed to contain the spread of COVID-19. These precautionary safety measures resulted in the loss of millions of jobs, the loss of trillions of dollars for social and economic support, and a notable end of community functions in all villages, rural areas, towns and cities (Rapoza, 2020).

### Personal Protective Equipment (PPE)

Initially, for individuals in the community without respiratory symptoms, the WHO didn't recommend wearing a medical facemask, since it didn't decrease the importance of other general measures to prevent the risk of potential infection. The WHO stated that the single use of a facemask didn't block the transmission of the disease; whereas the improper use and disposal of the facemask actually increased the risk of the COVID-19 infection. However, the WHO did support and emphasize the prioritized use of medical facemasks by health personnel in the context of COVID-19 as provisional universal precautionary measures (WHO, 2020c). In the United States of America, the CDC advised individuals to wear a cloth face covering when in public settings where social distancing was difficult to achieve, especially in areas with substantial community transmission (CDC, 2020). The rationale for the facemask was to contain secretions and prevent transmission from potential carriers who were asymptomatic or were pre-symptomatic with the infection. The CDC also advised individuals to avoid touching their eyes, nose, and mouth when removing the facemask, to employ hand hygiene after handling the facemask, and decontaminate the cloth facemask routinely.

**Physical - Social distancing**
Social and physical distancing was advised, as a universal precautionary measure (WHO, 2020c), especially in locations that had community COVID-19 transmission issues. Numerous countries had installed social distancing and quarantine regulations as measures to prevent the further spread of the virus. Social distancing was introduced primarily to reduce interactions between people in the wider community, where individuals may be infectious but not yet detected hence not isolated (Wilder-Smith, and Freedman, 2020). Since respiratory diseases can be transmitted by micro or macro droplets, universal precautions required a certain detachment for people and the practice of social distancing would reduce transmission of secretions. Social distancing in essence is physical segregation, and is particularly useful in situations where community transmission was thought to have occurred, but, also where the links between cases were uncertain. For example, social distancing included the closure of educational institutions such as universities, colleges and schools, religious places of worship, such as churches, mosques and temples, office buildings, public markets, and cancellation of all associated meetings, assemblies and congregations. In public markets where it was challenging to maintain physical distance, online shopping was encouraged to reduce the amount of human traffic, contact and subsequently disease transmission. Offices and factories were also identified as high-risk areas for COVID-19 transmission therefore working from home (WFH) was encouraged if possible. If WFH was not an option; then compliance with the WHO and CDC safety strategies was crucial (We We et al., 2020; WHO, 2020d).

**Self – Isolation/Quarantine**
Self–Isolation and/or Quarantine are some of the oldest and most effective tools for controlling communicable disease outbreaks. Quarantining is the restriction of a person and their activities. These people are not ill but they may have been exposed to an infectious agent, and the objective of the quarantine is to monitor for symptoms to ensure the early detection of positive cases. This public health practice was used widely in the fourteenth century in Italy. When ships arrived at the port of Venice from global plague-infected countries, they had to anchor and wait for 40 days, (the Italian/English translation Quaranta is 40) before disembarking their surviving passengers and unloading the cargo. In contrast, isolation is different when compared to quarantine; as it involves the separation of ill or infected persons from others to prevent the spread of infection.

Viewing the literature, quarantine as a precautionary strategy appears to be the most effective tactic to reduce both the number of infected individuals and reduce the death toll (Tao, 2003). In the current global pandemic, quarantine as a strategy has been effective in countries that initiated strict guidelines at the beginning of the pandemic. This strategy was highlighted by the Cochrane Library when indicated that quarantine can reduce the rate of those infected from 81% to 44%, and deaths from 61% to 31% (Brandstrom, 2016). Intriguingly, while China's quarantine strategy to the Wuhan public was criticized, it did allow the central government to control the number of cases effectively in states outside of Hubei and reduce the death toll significantly (Kaiser Health News, 2020).

**COVID-19 pandemic in a Malaysian context**
The first case of COVID-19 in Malaysia was detected on 25th January 2020 and involved three tourists from China (Reuters, 2020). The number of cases steadily increased before the nation's first two deaths were recorded on 17th March (WHO, 2020a). As of the 20th April 2020, Malaysia had recorded more than 5300 positive cases involving 89 deaths. A majority of these cases were traced back to a religious congregation (New Strait Times, 2020). The Malaysian Prime Minister enforced an MCO on 18th March 2020 as a palliation attempt to reduce community circulation and overloading of the nation's health care system. The 2020 Malaysia MCO (Malay: *Perintah Kawalan Pergerakan* Malaysia 2020), mandated a "*cordon sanitaire*", which in essence is the restriction of movement of people into or out of a defined geographic area, such as a community, region or country. The term

originally denoted a barrier that was used to stop the span of infectious diseases. Ever since the COVID-19 pandemic began, global life has altered profoundly, and universal precautions such as hand hygiene, use of PPE, facemasks and social distancing are now what Malaysians call the "new normal". Figure 2 *Elakkan 3S* (Avoid 3S) and Figure 3 *Amalkan 3W* (Practise 3W), display forms of the enduring methods of communication that the Malaysian Government has employed to increase awareness and the importance of maintaining standard precautions for the "new normal".

During a "lockdown" or MCO, visiting family, family gatherings, seeing friends, going to religious services, or going to work was either stopped or modified in some manner and the community, local or global were told to stay at home. Other nations also implemented similar measures in the form of a lockdown. A "lockdown" has a list of associated paraphrases such as containment, confinement, curfew or quarantine, and is a precautionary measure that prevents people from leaving an area due to a real or perceived threat to the community. Similar to MCO and lockdowns in China and Europe, the MCO restricted non-essential activity outside the home. Malaysians were only permitted to leave their homes for necessities such as buying groceries and seeking medical treatment. The MCO also restricted Malaysians from leaving the country and all foreigners from entry. Non-essential sectors were ordered to close operations or allow employees to WFH. Lockdown measures were professed as necessary to curb the spread of the virus as data concerning the virus remained unknown at that time (Cao *et al.*, 2019).

Due to the vagueness of this disease, there was a great deal of confusion and misunderstanding about the virus itself. Questions included, how did it spread? What were the safety precautions that should be taken to prevent transmission of the disease? These unknown factors became increasingly challenging for the authorities as vast amounts of misinformation were disseminated on social media which was confusing people's understanding of COVID-19 (Muhamad and Azlan, 2020). When the initial MCO announcement was made, Malaysians reacted in panic and confusion, not unlike the global response. Apart from panic buying, people overloaded public transportation centres to travel back to their kampongs (hometown villages), potentially increasing the risk of infection to other parts of the country. While this reaction to the MCO was not unexpected, it raised questions regarding the level of understanding, and attitudes toward COVID-19 among Malaysians. Maslow's hierarchy of needs therefore provides a framework for understanding people's motivation, feelings and practices toward COVID-19 and how they play an integral role in determining a community's response, reaction and compliance with behavioural change measures from health authorities.



**Figure 2:** *Elakkan 3S* - Avoid 3S**:** Safety measures for the
"*new normal*", Malaysian Ministry of Health (2020)

**Figure 2:** *Amalkan 3W* - Practice 3 W: Safety measures for the
"*new normal*", Malaysian Ministry of Health (2020)

**Non-compliance and COVID-19 safety guidelines**
Historically infectious diseases have been accountable for the greatest number of human deaths globally, for instance, the bubonic plague as a pandemic decimated about 25% of the European population (Scott and Duncan, 2001). The 1st pandemic outbreak of the bubonic plague was in the l500s; with a 2nd pandemic more virulent form of the disease, which struck France, Italy, Holland and England killing more than two and a half million people between 1600 and 1670. (Bollet, 2004) Outbreaks of bubonic plague also involved Asia throughout the 1800s; this 3rd pandemic began in Southern China in 1865. Between 1894 and 1929 there were over 24,000 cases in Hong Kong, which were transmitted to India, where more than twelve million people died over two decades (Hays, 2006)

The people at greatest risk from COVID-19 are the elderly and individuals with serious underlying medical disorders (CDC, 2019a). According to the CDC, older adults at risk of serious complications are those aged 65 years and above with comorbidities such as diabetes mellitus; liver disease; chronic lung disease, moderate to severe asthma; heart conditions; immune system deficits such as undertaking chemotherapy and radiotherapy, those afflicted with AIDS or HIV; morbid obesity; and treated with dialysis for chronic renal disease (CDC, 2019b; CDC, 2019d). As declared previously, the WHO recommended strategies to control the spread of the transmission of the COVID-19 infectious disease (WH0, 2020a). These strategies included hand hygiene and use of PPE, social distancing, the ritual of respiratory etiquette, obtaining medical advice and use of self-quarantine if ill. The reservations and fears that have arisen during this pandemic are whether people understand how the coronavirus is transmitted, the threat that it imposes; the concept of universal precautions, the correct use of PPE, and compliance with authorized safety guidelines. Therefore, insights into how and why people respond with non-compliance to evidence-based safety recommendations for the COVID-19 disease would be beneficial. Consequently, it would also be beneficial to be mindful of the motivating factors, which may influence people's reluctance and non-compliance to obey safety recommendations, such as hand hygiene; cleaning and disinfecting high-touch surfaces; social distancing, staying at home, avoiding crowds, gatherings, travel, and self-quarantine if unwell or exposed to persons who have been identified as infected.

In March 2020, the WHO announced a unique request to the community for increased compliance with public health measures (Table 1) which were intended to control the spread of COVID-19. This plea was for everyone, but notably intended for young adults who have been recognized globally as being non-compliant, and are often defiant regarding public health measures aimed at curbing the spread of COVID-19 (Cohen *et al*., 2020; Park *et al*., 2020; Roy-Chowdhury *et al*., 2020). Young adults repeatedly presented with mild or no symptoms of COVID-19, while still being infectious. Therefore, the potential for distribution of the virus was considered to be above what is typical, considering that these members of the community cultivate large social systems due to dynamic social lives (Cohen *et al.*, 2020).

It would be interesting and important to determine why some individuals are non-compliant and often defiant with the COVID-19 safety guidelines. Furthermore, learning what kind of needs an individual risks their life for, and the lives of their family and friends. Therefore, Maslow's theory of human needs has significant relevance and should be considered in the context of non-compliance with safety guidelines for COVID-19., Physiological needs, safety needs, social needs, esteem needs, and self-actualization may actually explain why people risk their lives, their families' lives, and the lives of the community by ignoring the nature of coronavirus with defiant behaviours such as non-compliance.

**Table1:** Safety guidelines for COVID-19 prevention and management

| Recommendations | Rationale |
|---|---|
| Hand hygiene | Reduce the risk of contamination from contact particles located on the hands |
| Cough etiquette | Reduce the risk of contamination from the spread of droplet and airborne particles from the respiratory tract of infected people |
| Facemask PPE | Reduce the risk of contamination from the spread of droplet particles from the respiratory tract of infected people |
| Face shield PPE | Reduce the risk of contamination from the spread of droplet particles from the respiratory tract of infected people |
| Physical distancing | Reduce the risk of contamination from contact, droplets and airborne particles of infected people by remaining 1 meter apart |
| Social distancing | Reduce the risk of contamination from contact, droplets and airborne particles of infected people by avoiding overcrowded places. |
| Working from home | Working from home is an isolation strategy that decreases employer and employee exposure and transmission to the COVID-19 virus by enhancing physical distancing and encouraging social isolation |
| Schooling from home | Schooling from home is an isolation strategy that decreases teacher and student exposure and transmission to the COVID-19 virus by enhancing physical distancing and encouraging social isolation. |
| Self-Isolation/Quarantine | Health agencies and governments mandated or recommended self-isolation or quarantine at home for people diagnosed with COVID-19 and for those who suspect that they have been infected. The recommendation was to stay home for 14 days after contact with COVID-19. Continue to observe for fever, cough, shortness of breath, isolate from family if possible and seek medical advice if required. |
| Lockdown as directed | A lockdown is a restriction strategy for social isolation that has been observed to significantly reduce the spread of the COVID-19 virus during the acute stages of the pandemic. |
| Vaccination | The COVID-19 vaccine produces an immune response to the SARS-Cov-2 virus. Developing immunity through vaccination means there is a reduced risk of developing the illness and its effects. |

**Maslow's hierarchy of needs, non-compliance and COVID-19 safety guidelines**
In Maslow's hierarchy of needs (Figure 1), physiological needs are basic and fundamental for the survival of individuals. In the setting of the COVID-19 pandemic, these needs seem to interrelate with the second level which incorporates safety and security needs. These basic needs typically occur in situations of shortage which generates feelings of anxiety and stress in people (Maslow, 1943). The feeling of concern can be attributed to a belief that people in the community might think that without basic physiological needs such as food, water, and other fundamentals during a lockdown, that this could affect their life significantly and much sooner than the consequences associated with the COVID-19 virus. Striking examples of this reasoning that occurred globally was the panic buying of unnecessary and unwarranted amounts of grocery items such as *toilet paper*. The stockpiling of such items by the global community underlines the apparent fear and unpredictability about their obtainability for a person's physiological needs.

To acquire these fundamentals, people were often non-compliant with recommended or authorized safety guidelines such as correct use of facemasks, social distancing to avoid crowded facilities and to ensure adequate ventilation. When leaving their homes to acquire grocery items, these non-compliant offenders potentially threatened not only their lives, but the lives of their families, the lives of front liners, and the lives of the community at large. The rationale for community non-compliance was essential to secure and satisfy their basic physiological needs (Table 2) Therefore, a logical conclusion according to Maslow, (1943) would be to assume that people must satisfy their basic needs, regardless of the consequences associated with a disease like the COVID-19 virus.

The second basic physiological need which Abraham Maslow advocated was the need for safety, which in the instance of COVID-19 can be signified as the motivation to be secure, protected in a safe environment. It embraces a need for cleanliness, employing hand hygiene, disinfectants, use of PPE, maintaining social and physical distancing, ensuring effective ventilation and lockdown self-quarantine if mandated. However, despite the fears associated with the COVID-19 virus, people continued to interact socially in groups, despite being prohibited. Irrespective of the social distancing and lockdown orders, people were often non-compliant, and demonstrated that human existence depends on interaction with other humans; in essence, reinforcing what makes us human beings. Human beings live in groups whether they are small like a family or large like a city or a country. Human beings are social animals because human beings cannot and do not live in isolation.

In the context of COVID-19, non-compliance behaviors and Maslow's third level; Belongingness and love needs, social contact appeared to be essential for people in the community, because they had loved ones they cared about. However, non-compliance behaviors related to psychological needs during the pandemic were often mitigated utilizing online internet tools, such as *WhatsApp, Zoom, Facebook, Google meet* to name a few. These virtual communication tools allowed people to stay in social contact with family, business and members of their community. Regular contact via online internet agents provided a psychological source of support to escape from the feelings of loneliness, perceived abandonment, anxiety, stress and fear. The needs related to level 3, belonging, love and human interaction; (Maslow, 1943), whether with family, friends or the community lowered anxiety and fear in these unprecedented times.

It should also be noted that social contact is important for a person's mental health as it helps to manage stress and major life changes like the "*new normal*" phenomenon. Appreciating that we as human beings are loved and valued by others is an important psychological factor to help people adjust to the undesirable aspects of their current COVID-19 lives, and assist people to be more positive about their future. Another consideration in respect to community non-compliance with lockdown strategies is the convincing evidence that proposes that human contact is also vital for physical health in human beings (Lancet, 2020). The association that is linked with the consequence of decreased human interaction is a host of co-morbidities which includes cardiovascular disease, autoimmune disorders, cancer and impaired wound healing (Lancet, 2020).

As an individual navigates Maslow's hierarchy of needs, the fourth level esteem needs, relates to prestige and accomplishment and are divided into two types of needs, internal esteem, which is <u>self-assurance</u> and external esteem, relating to communal support and praise. People who attain this need tend to gain satisfaction, recognition and acquire status. In the backdrop of the COVID-19 pandemic, a person's self-assurance and beliefs provide views, and judgments about the virus and could have been the motivation and justification for their non-compliance to the safety guidelines, such as social distancing or lockdown and self-quarantine. Unfortunately, community support of non-compliance with the safety guidelines could also have encouraged non-compliant behavior and additionally fueled community defiance.

Once individuals have achieved both the basic and psychological needs, they would be encouraged to achieve and reach the final level, that of self-fulfillment (Figure 1), the highest level, self-actualization. This need is located at the pinnacle of Maslow's hierarchy of needs, and in the setting of the COVID-19 pandemic could represent a front liner's or just a normal person's need to assist and support the community. The highest level of self-actualization is typically associated with the altruistic people who put themselves at risk, risking their lives to provide care for those people who could or have become afflicted with the COVID-19 virus. Examples would include the care services provided by front-line workers, such as health care professionals and providers, physicians and surgeons, police officers and the military. According to Maslow (1943) within such labors and endeavors, these individuals display the attainment of the highest level of human needs; that of self-actualization.

**Table 2:** Maslow's Hierarchy of Needs Compliance and non-compliance examples

| Maslow's (1943) Hierarchy of Needs | Compliance | Non-compliance |
|---|---|---|
| **Physiological needs** Biological requirements for human survival: Air, food, drink, shelter, clothing, warmth, sex, and sleep. | Livelihood requirements for human survival are readily available: Food, drink, shelter, clothing, warmth, sex, sleep and *"toilet paper"*. | Biological requirements for human survival: Food, drink, shelter, clothing, warmth, sex, sleep and *"toilet paper"* are not readily available: |
| **Safety needs** People desire order, predictability and control in their lives: Family, police, schools, business and medical care. | People in the community feel safe and secure because of the positive effects of government protocols and regulations, and police surveillance and diligence. | People in the community feel fearful, unsafe and insecure, because of the negative effects of government protocols and regulations, and police surveillance and diligence. |
| **Belongingness and love needs** Refers to the emotional need for interpersonal group relationships: Friendship, intimacy, trust, acceptance, receiving and giving affection, and love. | The community is united and cohesive as a group since they all believe that they share the same fate, regardless of faith, race, culture, skin color, or economic circumstances. | The community is divided and in chaos, since they believe that they do not share the same fate, concerning faith, race, culture, skin color or economic inequality. |
| **Esteem needs** Includes self-worth with dignity, achievement, mastery, independence and the desire for respect from others, status, and prestige. | People in the community have high self-worth and feel relaxed; independent and confident during the COVID-19 pandemic. | People in the community have low self-worth and feel stressed, dependent and insecure during the COVID-19 pandemic |
| **Self-Actualization** Refers to the realization of a person's potential, self-fulfillment, and desire to accomplish everything that one can, to become the most that one can be. | Individuals during the COVID-19 pandemic have all their basic needs, power, prestige achieved, and attain their full potential being directed by generosity and altruism to help others | Individuals during the COVID-19 pandemic, have all their basic needs, power, prestige achieved, but never attain their full potential because they do not help others and are directed by greed and self-centeredness |

## DISCUSSION

During a pandemic such as COVID-19, a pivotal emotional response for defying ecological threats is fear (Mobbs *et al*, 2015; LeDoux, 2012). Undesirable emotions are challenging and result from an unsafe situation which can be contagious, for the reason that fear can make threats appear more frightening (Cole *et al*, 2013). Fear often produces a change in a person's behaviour, if they feel incapable of dealing with the threat, and would result in a self-protective action (Witte and Allen, 2000). Fear responses associated with a positive attitude produce beneficial behaviours, such as "compliance" whereas fear reactions associated with a negative attitude produce self-justifying defensive responses, which could correlate to "non-compliance" (Witte and Allen, 2000) Another

challenge is that people often exhibit an "optimism bias*"* which is a belief that unpleasant things are less likely to occur to one-self compared to others. While optimism bias may be beneficial to avoid negative emotions (Sharot, 2011; Strunk *et al.*, 2006), it can lead people to underestimate the likelihood of contracting a disease such as COVID-19 and to therefore be non-compliant with public health warnings (Wise, *et al.*, 2020).

There is also a common belief that when feeling threatened, people panic, that is to say, they act instinctively for self-preservation, and in doing so potentially put in danger the entire group (Clarke, 2002). This conviction could explain community reactions in relation to the motivation for '*panic buying'* which occurred in the current COVID-19 pandemic. Unquestionably, there are people in the community who act with self-interest as their priority; for example, the global *"toilet paper"* farce. But collaboration and disciplined behaviour is also shared across a span of adversities; and there is a myriad of noteworthy altruism examples from people in the global community (Drury, 2018). One important altruistic factor that has emerged is a sense of communal identity and concern for others, which does arise from the shared experience of being in danger (Drury, 2009). This feeling can be directed by requesting that the public in communal terms take action for the common good of the community (Carter, *et al.*, 2015). Conversely, the sense of a communal identity can be challenged by inferring members of the community are seen as adversaries. This occurs when News reports state and show images of public chaos, panic buying, stockpiling of supplies and the empty supermarket shelves. These reports often imply that people who panic buy are self-centred, self-seeking, egocentric and selfish (Stiff, 2020) News stories that report this notion of panic; especially in times of crisis such as the COVID-19 pandemic, often create the very fear phenomena that they claim to reprimand.

An individual's behaviour; is often influenced by community values that reflect either approval or disapproval (Cialdini and Goldstein, 2004), and can also be influenced by standards, often called "norms" (Miller and Prentice, 1996) For example, people can undervalue the importance of health advocating behaviours such as compliance with hand hygiene (Dickie *et al.,* 2006) or underestimate harmful behaviours (Berkowitz, 2005) such as non-compliance with hand hygiene. Achieving compliant behaviours during a pandemic such as COVID-19 can often be accomplished by providing constructive information, such as clear, evidence-based instructions. However; accurate information about the health safety proceedings must also be endorsed by people in the community who approve of these actions (Shultz *et al*, 2007; Cialdini, *et al.*, 1991). Identified "norms" are most persuasive when identifiable to others with whom common characteristics are shared (Abrams *et al.*, 1990) such as compliance with safety health behaviours (Centola, 2011). Social networks such as family and friends of family can also increase compliance or non-compliance of behaviours which can be detrimental or favourable during a situation such as a pandemic (Christakis and Fowler, 2010). The COVID-19 virus is transmitted from person to person, and since people demand social group interaction, they are more likely to come into contact with other people and are subsequently among the first to be infected (Christakis and Fowler, 2013).

COVID-19 is a somewhat new virus that has had devastating global consequences since it was first detected in Wuhan, China in 2019. To date, there has been limited published research data on why some members of the community continue to be non-compliant with COVID-19 safety guidelines. In the circumstance of Maslow's hierarchy of needs, the uniqueness and uncertainties of this contagious disease make it essential for health authorities to devise appropriate strategies to prepare and manage public non-compliance in the future. Comprehension of Maslow's hierarchy of needs may clarify why some members of the community continue to be non-compliant with safety guidelines that are intended to reduce transmission and save lives. Utilizing Maslow's hierarchy of needs may "shed light" on community non-compliance behaviours with the safety guidelines, especially since health authorities have been consistently disseminating COVID-19 information ever since the disease was first detected. (WHO, 2021; Malay Mail, 2020) From the time the COVID-19 pandemic began in 2019, global life has transformed radically to what we now call the "new normal". During a "lockdown" or movement control order, everything we took for granted, such as visiting family, family gatherings, seeing friends, going to religious services or going to work was either stopped or modified in some manner and we as a community, local or global were told to stay at home. The consequence of the "new normal" created by the COVID-19 pandemic has provided an opportunity for a renewed application and interpretation of Maslow's Hierarchy of Needs.

Physiological needs have had a substantial impact on all nations, as the need for basics such as food and groceries was often experienced globally. Supermarkets and stores just couldn't keep up with overwhelming community demands. Items such as "toilet paper", flour, eggs, rice and pasta were insufficient and shopping became a consumer challenge, contest and a nightmare. Sleep and rest also became problematic for many people, which were expected in times of adversity as everyday routines were involved and altered. When the first level of basic needs was disrupted at the commencement of the pandemic, it was challenging for people, but when the second level, safety needs was also involved, life became to a certain extent harder and more distressing. The need for

safety and security was driven to the limit, as individuals and groups in the community were concerned about the economic climate, personal finances and employment security. Safety and security issues of concern involved the community non-compliance with authorized safety guidelines; such as employing hand hygiene effectively; use of correct PPE; social and physical distancing; self-isolation and quarantine if and when required.

The shortage of PPE for the community, and the frontline workforce, also became an issue, because people always expect to feel safe, whether at work, at home or when in the open community. Countless employers in conjunction with government recommendations also mandated that employees were terminated or went on '*leave without pay*', which resulted in mass unemployment as many jobs were made redundant. The rationale for this strategy was to reduce transmission of the COVID-19 virus by decreasing social interaction, increasing social distancing and banning public overcrowding. Although the first two levels of Maslow's Hierarchy, the physiological needs have been difficult to achieve, in respect to community compliance with COVID-19 safety guidelines, the third level appears to have been even more challenging, and problematic. Physical and social distancing issues relate directly to Maslow's third level of need, belongingness and love. This was a testing situation for members of the community; since it often required people to maintain physical and social distancing from "loved ones" in the family, extended family, friends and work colleagues.

Cutting-edge technology however did provide virtual online contact with these same "loved ones", but, non-compliance issues with social distancing requests still prevailed as face-to-face and physical contact such as "a smile, a hug, a cuddle and a kiss" are also basic human needs. An interesting observation to consider is that when the first three foundation levels of Maslow's hierarchy of needs are compromised, Esteem and Self-actualization as motivational targets may become problematic and unachievable. During the COVID-19 pandemic, community esteem was challenged and tested. Despite requests and mandates generated by authorized government officials, with "lockdown" directives, movement control orders, "stay at home" requests, WFH appeals, and self-quarantine instructions; people continued to be non-compliant by going shopping, attending religious gatherings, going to work, participating in anti-lockdown demonstrations, ignoring social distancing rules. However, these breaches of non-compliance almost certainly were associated with fear and anxiety, a lowered sense of self-esteem, guilt feelings from social judgment; negative thoughts and feelings related to remorse, and shame for their undesirable behaviour.

The final level being self-actualization would therefore be to some extent impossible to achieve in the circumstances related to non-compliance. However, many global communities and individuals have been very positive during the COVID-19 pandemic and complied with the safety rules and regulations. In doing so global communities have made the best out of a life-threatening situation, and seen "the light at the end of the tunnel". But many other members of the global community have found these unprecedented times extremely difficult to cope with and have been unmotivated. Whatever the desire may have been for the individual, the motivation to ascend to the final level just wasn't there.

## CONCLUSION

A positive consequence of the COVID-19 pandemic has been the opportunity for the global community to reflect on human beings and our nature. Is it true that a person lives by bread alone? If true, what happens when there is no bread or "toilet paper"? What happens to a person's motivation when there is plenty of bread and their stomach is full? Simultaneously "higher" needs transpire and these needs, dominate the human being. As soon as each of these needs is fulfilled, then a new still "higher" need emerges. This is the concept where basic human needs are organized into a hierarchy of relative prepotency. We as human beings are motivated by a hierarchy of needs, which are organized into a hierarchy where basic needs must be more or less met, rather than all or nothing prior to pursuing higher needs. The order of needs is not rigid but instead may be flexible based on external circumstances or individual differences. Most behaviors that are encouraged by motivation are simultaneously determined by more than one basic need (Maslow, 1943).

## TRANSPARENCY STATEMENT

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## CONFLICT OF INTEREST

The author hereby declares that there is no conflict of interest in this article.

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