Stigma During Covid-19 Pandemic: The Role of Infodemic as a Key Driver

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Stigma During Covid-19 Pandemic: The Role of Infodemic as a Key Driver

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Abstract: The creation and dissemination of COVID-19 stigma can damage efforts exhibited to prevent and counter the spread of the virus. A basic factor that triggers COVID 19 stigma is infodemic. It seems also that stigma and infodemic in the time of COVID-19 pandemic are interrelated to each other and work together. The new front in the COVID-19 battle should be therefore fighting stigma and infodemic driving it given that their impact can be very detrimental and long-lasting without suitable social measures needed to empower and support the vulnerable populations during such a global pandemic. Based on some selected literature and research conducted during the outbreak period of the coronavirus pandemic, the current article sheds light on this topic by focusing on the following points: 1). Definition of Stigma and relevant terms; 2). Victims of social stigma during the COVID 19 Pandemic; 3). Consequences of COVID 19-related Stigma; 4). Infodemic as a key driver of COVID 19-related Stigma; 5). Guidelines to fight stigma and infodemic during COVID-19 pandemic.

Keywords: Stigmatization, Covid-19 Pandemic, Infodemic, discrimination

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Introduction

The outbreak and rapid growth of the novel coronavirus disease (COVID-19) infection had a substantial influence on the daily activities and way of life of people across the world, especially, after the declaration of a global pandemic by the World Health Organization (WHO) in the second week of March 2020. The tragic fact is that no country is immune to the impacts of COVID-19 as can be seen in continuously rising infection and mortality rates despite the numerous governmental actions taken to counter the spread of the virus, including enforced self-isolation, quarantine, social distancing, travel bans, and national lockdowns of non-essential services, schools, and universities (Fiorillo & Gorwood, 2020).

With reference to consequences of Coronavirus disease, there is a wide agreement that the pandemic not only affects physical health, but also mental health and well-being (Fiorillo & Gorwood, 2020; Pedrozo-Pupo, & Campo-Arias, 2020). The impact of COVID- 19 has been, accordingly, great given that individuals' physical, psychological, and social health and life have been threatened. More specifically, the impact of COVID-19 can be direct (e.g., the somatic symptoms and psychosomatic complaints, physical discomfort and/or physical impairment due to the COVID-19 infection) or indirect (e.g., the related containment measures to fight the pandemic such as self-isolation, quarantine, social distancing and lockdown that may impair an individual's physical or psychosocial health) (Fiorillo & Gorwood, 2020).

A crucial issue that requires and deserves significant emphasis when considering psychosocial consequences of COVID-19 is "pandemic-related stigma and discrimination." (Bhanot et al., 2021; Hatzenbuehler, Phelan, & Link, 2013; Mahmud & Islam, 2020; Sotgiu, & Dobler, 2020; Stangel et al., 2019; Sulistiadi, Rahayu & Harmani, 2020; Turner-Musa, Ajayi, & Kemp, 2020), which entails negative attitudes and discrimination against people with features that are perceived to make them more likely to get and spread COVID-

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19 (Sotgiu, & Dobler, 2020; Sulistiadi, Rahayu & Harmani, 2020; Turner-Musa, Ajayi, & Kemp, 2020). Experience throughout human history has shown that stigma and viruses spread simultaneously during a pandemic. *"Stigma"* could further spread faster than the pandemic itself and, thus, result in various medical, social, psychological, economic, and political problems. When searching for factors contributing to COVID 19 stigma, research found that infodemic can work as a "key driver of social stigma in the COVID 19 time" (Bhattacharya, Banerjee, & Rao, 2020; Sotgiu, & Dobler, 2020; Sulistiadi, Rahayu & Harmani, 2020).

Pandemic-related stigma and infodemic constitute basic barriers that damage efforts exhibited to prevent and counter the spread of the virus. Further, stigma and infodemic driving it seem to be very detrimental to social life for individuals vulnerable to COVID19 stigma in general, and to social recovery for infected people in particular because their impact can be long-lasting without suitable social measures. It is, therefore, very important to focus on this topic to provide a valuable reference for research and policymakers, and to enable health professionals to take further steps to empower and support the vulnerable populations, their families and communities during such a global pandemic. The current paper, accordingly, will focus on stigma and infodemic during the COVID 19 pandemic. Based on some selected literature and research conducted during the outbreak period of the coronavirus pandemic, the current article will shed light on the following points and topics:

- Definition of Stigma and relevant terms;
- Victims of social stigma during the COVID 19 Pandemic;
- Consequences of COVID 19-related Stigma;
- Infodemic as a key driver of COVID 19-related Stigma;
- Guidelines to fight stigma and infodemic during COVID-19 pandemic.

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Definition of Stigma and relevant terms:

There are several theoretical approaches interested in explaining the phenomenon of stigmatization and the way it folds. This section will, in brief, try to explain the meaning of stigma and some relevant terms.

- Originally, the concept of "stigma" is a Greek term referring to body marks (such as a burn or a cut) to indicate a negative condition of a person (e.g., being a slave, a sinner, a criminal, or a social outcast) and, thus, to indicate which people should be “avoided and excluded.” (Adiukwu et al., 2020).

Currently, stigma is not related exclusively to a physical sign but entails negative discriminatory thoughts, feelings, and behaviors towards individuals with specific physical, racial, or behavioral characteristics perceived as displeasing or threatening by other society's members (Adiukwu et al., 2020).

However, despite the fact that research about stigma was created earlier, the full description of the stigma was firstly introduced by Goffman’s work (1963). Accordingly, the concept of stigma refers to a socially constructed phenomenon wherein individuals with visible characteristics (such as cut of burnt, diseases or disabilities) that differ from the majority of individuals are discredited and devalued by the society that consider them unfit for their inclusion in the mainstream society (as cited by Bhanot et al., 2021).

Given the complex ways in which stigma can manifest, to facilitate classification, stigma can been considered an overarching term combining issues related to inaccurate knowledge or problems of knowledge (e.g. misconception and misinformation regarding what an illness is, how it is acquired), attitudes (e.g., stereotyped negative beliefs, or negative emotional reactions, prejudice), and behavior (e.g. discriminatory practices) (Maiorano, et al., 2017) that influences the daily life of stigmatized individual in many ways, for example, in terms of social isolation, reduction of intimate relationships and parenting, exclusion from- educational settings, workplace and employment, difficulties or

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delay in help seeking, and poorer physical health care (Bhanot et al., 2021; Stangel et al., 2019).

Stigma is, moreover, multifaceted in that individuals can experience a variety of stigmas (e.g., perceived public/social, self or internalized, anticipated, enacted, and secondary or associative stigma) (Dar et al., 2020; Duan & Chen, 2020; Stangel et al., 2019). These different types of stigmas can be experienced individually or simultaneously.

More specifically, while public/social stigma exists when the larger society expresses a sense of "otherness" toward individuals due to specific features (e.g., disability or physical deformity), self- or internalized- stigma occurs, when the opinions and views expressed in social stigma are internalized and taken in by the stigmatized individuals and become part of their self-concept (Dar et al., 2020; Duan & Chen, 2020; Stangel et al., 2019). Accordingly, internalized stigma refers to the stigmatized individual's awareness, acceptance, and application of stigma or negative societal beliefs and feelings, as well as the social devaluation, related to his/her stigmatized status to oneself (Stangel et al., 2019).

- The term, perceived stigma refers to a person's perceptions about how others may think or feel about and act towards an individual with a specific characteristic, trait or identity (Stangel et al., 2019).
- Anticipated stigma refers to expectations of stigma experiences happening in the future. (e.g., expectations of bias being perpetrated by others if individual's health condition becomes known) This form of stigma is also classified as stigma experiences (Stangel et al., 2019).
- Experienced or enacted stigma can include experienced discriminatory acts or behaviors, which refer to stigmatizing behaviors that fall within the purview of the law in some places, such as refusal of housing, and experienced stigma, or

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stigmatizing behaviors that fall outside the purview of the law such as verbal abuse or gossip (Stangel et al., 2019).

- Secondary or 'associative' stigma refers to perceived and experienced stigma of those who are associated with stigmatized person (i.e., family, friends or healthcare providers, and those who provide care to stigmatized individuals) from the general public toward themselves (Duan, & Chen, 2020; Stangel et al., 2019). Such associations may be based on genetic, contagion, moral, ethnic, and/or geographical reasons (Duan & Chen, 2020; Stangel et al., 2019).
- Structural stigma includes the policies of private and governmental institutions (e.g., newspaper or a television) that intentionally restrict opportunities of stigmatized people (Maiorano et al., 2017). This form of stigma further includes major institutions' policies that are not intended to discriminate but whose consequences nevertheless hinder the options of stigmatized people (e.g., when an institution like a newspaper or a television show publishes or broadcasts negative and/or prejudicial portraits of people with disability or people with illness) it becomes a strong source of structural stigma (Maiorano et al., 2017).
- Stigma practices can include stereotypes (i.e. beliefs about characteristics associated with the group and its members), prejudice (i.e. negative evaluation of the group and its members), stigmatizing behavior (i.e. exclusion from social events, avoidance behaviors, gossip), and discriminatory attitudes (i.e., belief that people with a specific characteristic (e.g., health condition) should not be allowed to participate fully in society) (Stangel et al., 2019).

In view of the above reviewed definitions, it could be concluded that stigma can be categorized into two broad categories: 1), External stigma from community attitudes and practices or from the perspective of the non-affected person, and 2), Internal stigma within- or from the perspective of- the affected person (i.e., internalized, perceived, and experienced stigma) (Link & Phelan, 2001). These different types are all interrelated and may affect the self-efficacy

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of the affected person, the full participation in the community, personal well-being, and self-esteem (Bhanot et al., 2021; Hatzenbuehler, Phelan, & Link, 2013; Link & Phelan, 2001; Mahmud & Islam, 2020; Stangel et al., 2019).

Health related stigma AND COVID-19 Stigma:

- **Health-related stigma** is a social-psychological concept that has a great effect on the daily lives of the individuals suffering from a specific illness or health condition. By definition, health-related stigma refers to "a personal experience or social psychological process characterized by blame, devaluation, exclusion and rejection, as a result of anticipating or experiencing negative social judgments due to the negative association between a person or group who share certain features and a specific illness or health condition" (Weiss, Ramakrishna & Somma, 2006).

- **The stigma of COVID-19,** in the present context, the stigma of COVID-19 could be comprehended as a social psychological process that set to blame, devalue, reject and exclude those who are perceived to be a possible source of COVID 19 disease and may pose higher risk and greater threat to the effective social living in the society.

- Literature cited that health stigma in general and the stigma of COVID-19 in particular has been considered as a major social determinant of health that drives morbidity, mortality, and health disparities, and has been described as a 'hidden burden' of disease (Adiukwu et al., 2020; Stangl et al., 2019). Addressing stigma is, therefore, very important, as it can drive people to deny or hide the illness to avoid discrimination, to prevent or delay timely health care seeking, and can discourage people from adopting healthy behaviors. Because of stigmatization and the fear of being labeled as someone who carries an infectious disease, many at risk populations may not seek care until symptoms are unmanageable or may not seek care at all (Adiukwu et al., 2020; Lohiniva et al., 2021; Stangl et al., 2019). Such barriers could contribute to more severe health problems, and greater difficulties in controlling the viral

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disease outbreak (Lohiniva et al., 2021). Stigma and discrimination often also affect the mental health of stigmatized people, which may itself worsen these negative outcomes (Bhanot et al., 2021; Bhattacharya, Banerjee, & Rao, 2020; Hatzenbuehler, Phelan, & Link, 2013). Stigmatization can also lead to rejection, avoidance and social distancing (Stangl et al., 2019), potentially leading to further harm, such as lowering individuals' quality of life and making it harder for them to secure their basic needs (e.g., foods).

Victims of social stigma during the COVID 19 Pandemic:

Based on the above reviewed definitions, it could be stated that stigma is manifested through the marginalization and social isolation of certain individual/groups, which is often based on characteristics and perceived social responsibility of their illness and/or circumstances (Bhat et al., 2020; Logie and Turan, 2020). Accordingly, COVID19 stigma targets not only infected individuals, or those who are undergoing treatment, or who have recovered from COVID-19, or who have succumbed to it, and those associated with them, including their caregivers, family members, those in the same community, or the same racial/ethnic group (Bhanot et al., 2021; Bhattacharya, Banerjee, & Rao, 2020; Bhat et al., 2020; Logie and Turan, 2020). The brunt of social stigma is also directed towards frontline workers, medical practitioners, nurses, police personnel, psychiatric and justice-involved populations… etc. (Fiorillo & Gorwood, 2020; Taylor et al., 2020; Turner-Musa, Ajayi, & Kemp, 2020; World Health Organization, 2020b). Consistently, media reports from around the globe described how frontline service and healthcare providers have been assaulted, hit with rocks, sprayed with bleach, spit on, denied rides to work and made homeless because of fears that they would transmit COVID 19 to the people around them (Taylor et al., 2020; World Health Organization, 2020b).

Furthermore, victims of social stigma during the COVID 19 pandemic can also be those who are more vulnerable to be infected with the virus and/ or at higher risks of death from COVID-19, including, elderly/older adults (Al-Rawi & Shukla, 2020), individuals with disability, those who suffer from psychiatric disorders and chronic

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illness (e.g., asthma, diabetes, coronary heart disease, hypertension, kidney disease, lung disease), compromised immune systems, and those with overweight (including obesity) (Pedrozo-Pupo, & Campo-Arias, 2020). Stigma over the death has been also witnessed during this pandemic and has not even shown mercy to the dead bodies of the patients (Bhanot et al., 2021; Turner-Musa, Ajayi & Kemp, 2020).

Existent literatures also showed that people of minority background (e.g., those of migrant origin), were more likely to face numerous xenophobic incidents, hate speeches and crimes, on the basis of their real or perceived national origin. Such stigma has the potential to impact the migrants' mental and physical wellbeing and excluding them from accessing services that are otherwise available to the general population (Bhattacharya, Banerjee, & Rao, 2020). Some scientists, further, attributed the higher mortality among migrants during the pandemic to the systemic inequalities related to social determinants of health such as access to appropriate housing, diet or education. Additionally, stigma in the form of stereotyping and harassment directed toward particular ethnic or racial groups perceived to be associated with the spread of the virus (e.g., there were unsubstantiated beliefs, such as that the virus is transmitted via products from China) (Bhanot et al., 2021).

Stigma and discrimination toward people who have travelled abroad emerged during the outbreak of COVID-19. Research consistently showed that during the early phase of the pandemic, when the majority of those diagnosed with COVID-19 were travelers, there was much stigma towards people traveling into the represented countries as well as migrants of Asian descent (Duan, & Chen, 2020; Turner-Musa, Ajayi, & Kemp, 2020). There was anger towards various governments for allowing people to travel into the countries. Stigma and discrimination that stems from it can occur when people associate COVID-19 with a nationality, even though not everyone in that nationality is at risk for the disease.

More interestingly, literature also suggested that individuals, who strongly hold religious beliefs that God will protect them from illness, are at great risk for COVID-19 as such beliefs may result in non-testing and non-compliance with physical

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distancing as a protective strategy to fight the virus (Turner-Musa, Ajayi, & Kemp, 2020). Given that these populations are perceived to be at greater risk for the disease, they are also more likely to be stigmatized and to experience, for instance, negative encounters with healthcare systems which minimize the likelihood they will seek testing for the virus or follow needed treatment (Turner-Musa, Ajayi, & Kemp, 2020).

Altogether, it is clear that the aggravation of stigma toward vulnerable populations during a pandemic would have severe outcomes on a societal as well as individual level. It is therefore critical that research is conducted to understand how stigma toward vulnerable populations occur, and understand the effects of these stigma in an effort to mitigate its' adverse psychological and other health outcomes, and to inform COVID-19 related public policy and decision-making by stakeholders.

Consequences of COVID 19-related Stigma:

As noted earlier, the pandemic has caused many deleterious outcomes including significant death and serious health issues, severe economic, educational, psychological, and social impacts, and even international crises. However, one of the most “permanent” and “resistant” issues emerged during this pandemic is, undoubtedly, stigma and discrimination. Even if stigma is considered as a crucial psychosocial consequence of the pandemic, "stigma epidemic" could further spread faster than the pandemic itself and, thus, result in various medical, social, psychological, economic, and political problems (Bhanot et al., 2021; Hatzenbuehler, Phelan, & Link, 2013; Mahmud & Islam, 2020; Sotgiu, & Dobler, 2020; Stangel et al., 2019; Sulistiadi, Rahayu & Harmani, 2020; Turner-Musa, Ajayi, & Kemp, 2020).

It has been found that stigma against certain individuals/groups for being the reason for pandemic outbreak has the potential to increase the negative consequences of a disease in many ways. For instance, research demonstrated that unchecked stigma triggered during the early phase of the pandemic can lead to dire psychosocial comorbidities and the risk of psychiatric disorders (Bhattacharya, Banerjee, & Rao, 2020). Studies, further, suggest that stigma associated with a particular disease such as COVID 19 is very dangerous as it can thwart, undermine, or exacerbate several

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processes (i.e., availability of resources, social relations, psychological and behavioral responses, and stress) that ultimately lead to adverse health outcomes (Bhanot et al., 2021; Hatzenbuehler, Phelan, & Link, 2013; Mahmud & Islam, 2020; Stangel et al., 2019). To illustrate, infected or exposed individuals may experience discriminatory behaviors like isolation, refusal to provide service, harassment and bullying by community members; stigmatized individuals (e.g., patients and their families) may feel judged by others; and some patients may feel shame and self-rejection (Bhanot et al., 2021; Dar et al., 2020; Hatzenbuehler, Phelan, & Link, 2013). Such disease-related stigma can, in turn, increase suffering to these who are stigmatized and/or who are at risk for the disease and cause them to modify their behaviors because of fear of being discriminated against (e.g., may hide their disease, deny clinical symptoms, avoid voluntary testing and counseling, reduce their help-seeking behaviors, and not seek medical care or treatment, avoid seeking health care to test for COVID 19 and not practicing healthy behaviors) (Bhanot et al., 2021; Hatzenbuehler, Phelan, & Link, 2013; Mahmud & Islam, 2020; Stangel et al., 2019). Such behaviors may, in turn, undermine efforts of public health authorities to control the disease, hindered their ability to treat and prevent stigmatized health conditions and pushed the pandemic underground (Stangel et al., 2019). Existent literature, moreover, demonstrates that the effects of the stigma associated with COVID-19 have been so catastrophic that in many cases the corona-affected patients would not get support from their close friends, relatives and even from their family members (Mahmud & Islam, 2020).

Impact of stigma can be, further, long-term, affecting the person beyond the acute phase of illness, continuing when people are no longer symptomatic, and when there is no longer a risk of others acquiring COVID-19 from the person. For instance, stigmatized individuals have become disadvantaged in terms of healthcare services (e.g., delayed treatment, poor adherence to treatment), educational opportunities, employment, housing, social relationships (e.g., parenting, reduction in intimate relations, ill-treatment by neighbors and colleagues), restricted entry to many countries (Bhanot et al., 2021; Stangel et al., 2019).

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Stigma can also occur by association and thus may generate an adverse influence (e.g., higher rates of stress and burnout) to people associated with COVID-19 through their work (e.g. professional health care- and social care- workers), people affiliated with a person who is unwell (e.g. caregivers, family members) (Fiorillo & Gorwood, 2020), people of certain ethnic backgrounds or country of origin (due to public perception of places and populations amongst whom the virus is more common or where it occurred earlier) (Al-Rawi & Shukla, 2020; World Health Organization, 2020b), and communities who may be associated with the infected patients. For affected areas and countries, the stigmatization can cause considerable economic loss, regional discrimination, and racism if people avoid groups or areas associated with the disease. Altogether, stigma, in this term, not only impedes opportunities to minimize the spread of infection but may also increase disease transmission and mortality from it. Thus, stigma is an important issue for all people in the battle against COVID-19 (Adiukwu et al., 2020; Budhwani & Sun, 2020; Messer et al., 2006).

Beside the above listed outcomes, stigma has also the potential to disrupt multiple psychological and behavioral processes. Literature in a consistent line cited that experiencing stigma would definitely result in lowered levels of self-worth and self-esteem. Further, internalization of negative societal perceptions and views directed toward one's stigmatized status or group can have deleterious health consequences (Hatzenbuehler, Phelan, & Link, 2013).

Stigmatized individuals are more likely to use and deplete higher levels of self-control to manage their devalued/stigmatized identity, which in turn requires a flexible use of emotion regulation strategies in the short term. Over time, this great effort needed to face and cope with stigma weakens individuals' psychological resources and thus their ability to adaptively regulate their emotions, which can have negative consequences for both mental and physical health. Consistently, several studies have demonstrated that those who experience stigma report engaging in more maladaptive emotion regulation strategies, (e.g., rumination and suppression), which in turn produce greater symptoms of psychological distress (Hatzenbuehler, Phelan, & Link, 2013).

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Experiencing stigma can also lead to maladaptive coping behaviors (e.g., smoking and drinking) that rise additional risk for adverse health outcomes (Hatzenbuehler, Phelan, & Link, 2013).

Being with a stigmatized identity can, further, expose stigmatized individuals and groups to various types of stress. These stressors can range from external events (e.g., victimization and violence) to internal responses (e.g., expectations of rejection), both of which are associated with health problems among stigmatized group members. In this term, stress emerges as one mechanism through which stigma may create adverse health outcomes. For instance, stress of experiencing discrimination and mistreatment or unfair treatment is associated with adverse physiological responses, including diastolic blood pressure reactivity and increased cortisol output that in turn may compromise health if chronically activated (Hatzenbuehler, Phelan, & Link, 2013). It has been also cited that some stigmatized individuals have equated their distress to posttraumatic stress disorder (Bhanot et al., 2021).

Stigma, in a view of above, can enable varieties of discriminatory behaviors that ultimately deny the individual/group full social acceptance, restrict individuals' opportunities and fuel social inequalities. Subsequently, stigma influence on population's health outcomes is manifested in worsening, undermining, or impeding a number of processes, including social relationships, resource availability, stress, and psychological and behavioral responses, and thus exacerbating poor health.

Infodemic as a key driver OF COVID 19-related Stigma:

Stigma in society can be diverse and differing case by case. However, in spite of this difference the sources of stigma tend to be similar, including a lack of information and the social context. In a consistent line, literature and research conducted during the outbreak of the pandemic cited at least three main factors that the level of COVID 19 stigma is based on: 1) the disease is novel and many factors remain unknown (i.e., lack of information and insufficient knowledge); 2) human being by nature is often afraid of the unknown; and 3) the fear of the unknown can easily be

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associated with ‘out-group members’ (i.e., others) (Sotgiu, & Dobler, 2020; Sulistiadi, Rahayu & Harmani, 2020; Turner-Musa, Ajayi, & Kemp, 2020).

When looking at the above mentioned factors contributing to stigma associated with COVID-19, it seems obvious that infodemic –as characterized by abundant news, mixing facts, misinformation, conspiracy theories, rumors and fake news – can be considered as the 'missing link' that works as a 'key driver of social/public stigma in the COVID 19 time' (Bhattacharya, Banerjee, & Rao, 2020; Sotgiu, & Dobler, 2020; Sulistiadi, Rahayu & Harmani, 2020).

More specifically, in the middle of unpredicted and ambiguous outbreaks, it is common for people to create and spread myths (i.e., beliefs that contradict logic or evidence), misinformation through rumors (i.e., unsubstantiated ideas that may or may not be true, presented as truths based on sound evidence), hate speech, xenophobia, and conspiracy theories… etc., possibly in order to relieve their uncertainty and fears about the situation. This case of infodemic is unfortunately rife especially on mass media. In this term, literature demonstrated that public response is closely correlated to the amount of media coverage present for any event. When a health event or crisis is reported on public service or traditional media (e.g., radio and TV), or social media, infodemic and misinformation can arise and lead to panic, anxiety, and mental health issues. The result is that an anxious public finds it difficult to distinguish between evidence-based information and a broad range of unreliable misinformation (Naeem & Bhatti, 2020). Further, anxiety and fear caused by unknown and contradict information can overcome empathy when the public is presented with such state of infodemic (Sulistiadi, Rahayu & Harmani, 2020). Without empathy, the attitude that emerges in response to patients is likely to be stigmatization to avoid illness and infection.

In the context of COVID 19, research cited that in the wake of the pandemic it has been witnessed a massive infodemic with the public being bombed with vast quantities of information. Much of the information was not scientifically correct, and included a vast amount of medical misinformation (e.g., treatments promoted on social media such as eating garlic or drinking bleach can hinder the fight against COVID-19)

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(Kouzy et al., 2020; Naeem & Bhatti, 2020; Sotgiu, & Dobler, 2020), myths (e.g., the infection is a bioweapon developed by a government or terrorist organization) (Adiukwu et al., 2020; Yufika, 2021), rumors (e.g., the pandemic was a religious curse or a biological weapon by the Chinese) (Adiukwu et al., 2020) and conspiracy theories (e.g., that Bill Gates caused the epidemic to sell the world a vaccine) from unfiltered channels, often spread on traditional and social media and other outlets at an unprecedented speed (Sotgiu, & Dobler, 2020). In such a rapidly changing situation with millions on lockdown, as with the novel coronavirus, lack of- or insufficient-knowledge and contradictory information about the transmission of the disease and protective treatment and strategies needed to prevent transmission, can increase fear, anxiety and uncertainty among the population (Sotgiu, & Dobler, 2020; Sulistiadi, Rahayu & Harmani, 2020; Turner-Musa, Ajayi, & Kemp, 2020) and thus may also increase their use of the mass media, including traditional- as well as social- media, as a major source of information about the COVID-19 crisis to alleviate their anxiety and uncertainties (Naeem & Bhatti, 2020). Mass media, as noted, are spreading very rapidly a large amount of uncontrolled news with the risk of infodemic and misinformation running faster than the virus itself and, thus, creating further panic, negative emotions, confusion, uncertainties and worries among its audience and recipients (Al-Rawi & Shukla, 2020; Fiorillo & Gorwood, 2020). Anxious audiences who are unlikely to be able to decide what is true and what is false or to distinguish between what are facts, and what are opinions, propaganda or biases (Naeem & Bhatti, 2020), and as a result, are likely to believe biased and vague information provided by media that appeals to their emotions and personal beliefs, as opposed to information that is regarded as factual and or objective (Maoret, 2017). Further, anxiety and fear caused by unknown can overcome empathy and sympathy when the public is presented with such state of infodemic (Sulistiadi, Rahayu & Harmani, 2020).

To avoid illness and infection, such anxious low empathic public will be more likely to adopt stigmatizing beliefs and behaviors (i.e., stereotyping, discrimination, and labeling) toward "others/out-group members" who have features that are perceived to make them more likely to get COVID-19 and thus more responsible for spreading it

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(i.e., those diagnosed with COVID-19, their close contacts, their places, healthcare workers who treat the patients, racial/ethnic groups (e.g., Chinese people) and people who have traveled from areas affected by the pandemic and thus believed to be the cause of the disease) (Bhattacharya, Banerjee & Rao, 2020; Duan, & Chen, 2020; Turner-Musa, Ajayi, & Kemp, 2020; Yufika, 2021). Discriminatory behaviors, such as isolation, refusal to provide service, harassment, and bullying, may be experienced by the stigmatized group.

Important to note that infodemic exerts its influence by shifting individuals' attention from the fact that the true enemy is COVID-19 and not the sufferer. Infodemic often downplayed the severity of COVID-19 or even denied the existence of the disease. Consistently, research noted that misinformation is less likely to mention the threats of COVID-19. Conspiracy theories also were more likely to include group labeling (e.g., attaching certain locations or ethnicity to the disease by labeling COVID-19 as "Wuhan/Chinese virus"; attributing the origin of COVID-19 to culturally Chinese foods; excessively sharing the term Corona-Jihad to blame Muslims for spreading the virus) (Adiukwu et al., 2020; Al-Rawi & Shukla, 2020), and responsibility information (e.g., to blame others for the outbreak), but less likely to mention the peril of COVID-19 (i.e., less likely to indicate the threat of COVID-19). This in turn created stigma towards people from those places or in those ethnic groups (Al-Rawi & Shukla, 2020). For example, there were anecdotal evidence and some media reports that Chinese restaurants around the world were victim to racist attacks and discrimination and were at greater risk of shutting down during the COVID-19 pandemic because of decrease in customers after spreading misinformation that attributing the origin of COVID-19 to culturally Chinese foods (Li et al., 2020; Sotgiu, & Dobler, 2020).

In a view of above, it seems that stigma and infodemic in the time of COVID-19 pandemic are interrelated to each other and work together. Strategies to combat stigma should therefore without doubt consider infodemic and vice versa. This point will be the critical focus of the next and final section of the current article.

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Guidlines to fight stigma and infodemic during COVID-19 pandemic:

As has been discussed throughout this article, stigmatizing attitudes and behaviors driven by infodemic affect not only the control of the outbreak, thus contributing to a greater infection, underreporting of symptoms, decrease in the use of health facilities, higher mortality, and greater socio-economic consequences on the affected communities, but also may have short- and long- term negative outcomes on the mental health of those affected people, health care workers, and the affected communities (Adiukwu et al., 2020; Al-Rawi & Shukla, 2020; Bhanot et al., 2021; Dar et al., 2020; Fiorillo & Gorwood, 2020; Fukuda et al., 2015; Hatzenbuehler, Phelan, & Link, 2013; Mahmud & Islam, 2020; Stangel et al., 2019; World Health Organization, 2020). It is therefore important to develop and adopt anti-stigma strategies throughout the COVID-19 pandemic. A set of general conceptual guidelines combined with brief discussion are listed below to address key points related to stigma and infodemic and thus to suggest tools can be used in the fight against infodemic as well as COVID-19 related stigma. These guidelines can be, further, tailored at the institutional, community, and individual levels and tailored to fit any phase of the COVID-19 pandemic.

- **One must stay informed.** While lack of or insufficient knowledge and contradict information can result in stigma against population vulnerable to COVID 19 (Bhattacharya, Banerjee & Rao, 2020; Sulistiadi, Rahayu & Harmani, 2020), the provision of clear education to the right targets using appropriate cultural mechanisms for the local community can increase knowledge regarding COVID 19 (e.g., information on disease causes; how it is transmitted; disease severity and symptoms; treatment, prevention; effectiveness of physical distancing measures; identify the feelings and fears about the pandemic and the affected or exposed individuals in the proximity) and thus eliminate negative stigma (Adiukwu et al., 2020; Bhattacharya, Banerjee & Rao, 2020). The central or regional governments, together with local leaders, religious leaders and the local security apparatus, have the responsibility to disseminate proper information and deliver education regarding COVID-19. The government and community must, further, develop strategic, concrete, and

appropriate communication strategies that align with the culture of the community, to increase empathy and sympathy toward vulnerable population rather than confusion, stigma, discriminatory attacks against them (Bhattacharya, Banerjee & Rao, 2020; Duan, Bu & Chen, 2020; Gronholm et al., 2021).

- **Be aware of the power of messages and behavior of influencer individuals and groups**: Regional leaders, celebrities and famous individuals who suffer from COVID-19 must be open regarding their diagnoses to help normalize the disease. They should also inform and educate the public through traditional as well as social media to help lift taboos. Self-testimonies and supportive attitudes from celebrities and community leaders are perceived as helpful and may rise hope and spread inspiration among their fans who will be in turn more intrigued if they discover that people they admire can also suffer from COVID-19 (Bhattacharya, Banerjee & Rao, 2020). Religious leaders and organizations should observe the possible confusion of facts regarding COVID-19 and cultural and religious beliefs while providing information and support to the public (Adiukwu et al., 2020). For instance, various types of religious-themed myths and misconceptions about COVID-19 have been widely spread in different countries, when some religious leaders and healers attributed the pandemic to a religious curse. Such beliefs can create and fuel stigma towards the illness and result in labeling infected people as 'nonbelievers' or 'sinners' and 'spiritually unclean.' (Adiukwu et al., 2020).
- **Be aware of the content of delivered information:** Spreading knowledge about COVID-19 (e.g., causes of the disease, how it is transmitted, its' severity and symptoms, treatment, and prevention), is less confusing and more beneficial in fighting the illness than informing the public regarding the identities of those who are affected and those who are handling COVID-19.
- Existent literature, consistently, pointed at importance of avoiding the use of language and words that reflect stigmatizing attitudes when talking about

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COVID-19 (e.g., never attach locations or ethnicity or pre-illness behavior, travel history, age, gender or underlying medical conditions to the disease, never refer to people with COVID-19 as 'cases', 'victims' or 'suspects'…etc.) (Gronholm et al., 2021). This guideline is consistent with what WHO recommended regarding importance of finding suitable name to refer to this virus without indicating to any geographical location, an animal, an individual, or a group of people, and which is also pronounceable and related to the disease (WHO, 2020).

- **Address various types of infodemic:** This guideline is consistent with what has been postulated throughout the current article regarding the role that infodemc can play in facilitating the creation and dissemination of COVID-19 stigma (Bhattacharya, Banerjee, & Rao, 2020; Sotgiu, & Dobler, 2020; Sulistiadi, Rahayu & Harmani, 2020). Thus, another way to reduce the stigma is to address various types of infodemic, engage critical thinking skills, and use effective communication strategies to spread the facts (Adiukwu et al., 2020; Gronholm et al., 2021). Anti-stigma campaigns should, therefore, include correcting negative terminologies (e.g., Chinese virus; Wuhan virus; Corona-Jihad....etc.), using neutral terminologies, correcting myths, rumors, misinformation and other types of infodemic, correcting stereotypes and challenging bias, modifying and correcting specific public misperceptions which vary among different cultural groups and religions. The WHO and other agencies have suggested using simple language and social media to inform and educate the general public about the facts of COVID-19. More importantly, people should be recommended to access trustful sources of scientific knowledge from national and international official websites (e.g., CDC and WHO), reliable TV channels, and journals (Duan, Bu & Chen, 2020).

- **Social contacts with others should not be cut off during the pandemic outbreak:** Consistently, the WHO has changed the phrase social distancing to physical distancing, to encourage global society to keep social contacts with

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family and others while maintaining a physical distance. Social contact strategies to reduce stigma could be implemented by fostering close telecommunication with the affected individuals (Adiukwu et al., 2020). Communication with others can continue through media, without being physically close (e.g., call or text friends, relatives, or neighbors, especially those who are sick and sharing experienced anxiety with trustful people or with experts, through cyber space). Consistently, existent literature demonstrated that social media can play buffering role by guiding users to socialize online in an effective and organized way during lockdown phases, through scheduling daily social online activities with family, friends, colleagues, and broader social actors (Bhattacharya, Banerjee & Rao, 2020; Gronholm et al., 2021; Marzouki, Aldossari & Veltri, 2021). From a psychological perspective, social media use can further manage and mitigate the forms of anxiety public experience during the pandemic (Marzouki, Aldossari & Veltri, 2021).

- **Using Media as a basic channel to fight infodemic and COVID-19 stigma:** In this term, media can ease fears and anxiety among the public and create empathy toward the stigmatized population among the dominant public by transmitting scientific, balanced and up-to-date information about COVID-19 and explicit messages about the deleterious effects of stigma articulated by credible officials and expertise (Duan, Bu & Chen, 2020). Producers and editors of mass media platforms should ensure the truthfulness of their contents and the promotion of positive attitudes. On the other hand, social media platforms should monitor, rapidly flag and delete negative contents that contravene their terms of use and promote violence or stigma and discrimination (Adiukwu et al., 2020). Journalists have also an ethical responsibility to convey messages with proper context and realism that based on good science and disease management principles (Gronholm et al., 2021). Journalistic reports further should not refer to the role of certain groups or individuals in spreading the virus given that such content might trigger stigma, devalue affected people, assigns blame, lead to a false sense of security in the

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rest of the population, and undermine pandemic control strategies and procedures (Bhattacharya, Banerjee, & Rao, 2020).

- **Increase empathy towards population at risk of stigmatization:** Existent research cited importance of presence of new approaches to mitigate stigma and to counteract the damaging effects of the infodemic during COVID-19 by increasing empathy towards population at risk of stigmatization (Adiukwu et al., 2020; Bhattacharya, Banerjee, & Rao, 2020; Gronholm et al., 2021; Lohiniva et al., 2021; Marzouki, Aldossari & Veltri, 2021). Consistently, empathy has been considered -beside knowledge, care and awareness- as *"the generic but neglected pillars to change 'othering' into inclusiveness, collectiveness, and belonging for better coping and resilience against the ongoing crisis"* (Bhattacharya, Banerjee, & Rao, 2020, P:385).

Conclusion:

Summing up, the pandemic-related stigma and infodemic driving it constitute basic barriers that violate human rights and damage efforts exhibited to prevent and control the outbreak, thus contributing to a greater number of infected individuals, higher mortality, economic losses, and greater socioeconomic consequences on the affected communities. Stigma and infodemic can also have short- and long-term negative outcomes on the mental- as well as physical- health of those affected people, health care providers/workers, and the affected communities. Such deleterious impact can be further long-lasting without suitable social measures and strategies needed to mitigate and fight it. It should be therefore, a priority for every society during this pandemic to develop activities and strategies aiming at 1), preventing the dissemination of COVID-19-related stigma and 2), fighting infodemic driving and triggering these stigma attitudes and behaviors. This can be achieved by educating the general population, increasing empathy toward vulnerable population, celebrating those at the forefront of the pandemic (e.g., health care workers), fighting rumors, myths and misinformation, and putting down policies to protect and empower the vulnerable populations, their families and communities during such a global pandemic. Furthermore, it is very

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important to implement anti-stigma interventions in the post pandemic period to limit self-stigma amongst survivors and health providers.

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