Impact of SARS-CoV-2 Pandemic on the Prevalence of Death Anxiety in Healthcare Workers and Citizens in Heavily Impacted Countries

During the past year, an outbreak of a novel coronavirus, known as SARS-CoV-2 or COVID-19, has spread across the globe, causing more than 47,930,000 confirmed cases with over 1,221,000 deaths, as reported by the World Health Organization, who declared the disease a pandemic on March 11, 2020 ( WHO, 2020; Cucinotta & Vanelli, 2020). While infection with SARS-CoV-2 can cause a range of symptoms, the novel virus can be deadly for elderly individuals or those with compromised immune systems. To prevent the spread of SARS-CoV-2, many countries have implemented lockdowns to keep people indoors and separated from one another, though, these strategies rely heavily on citizen compliance and participation. Additionally, health organizations like the WHO and the Centers for Disease Control and Prevention (CDC) have advised specific protocols for individuals and healthcare facilities to mitigate the spread of this novel virus.

These new circumstances have undoubtedly negatively impacted the mental health of people around the world. Not only have many families had to deal with grief resulting from the loss of a loved one, but isolation and mass disease spread can also increase anxiety and stress in individuals (Lee et. al, 2020; Brook and Clark, 2020; Penberthy et. al, 2020). The extent of SARS-CoV-2’s impact on mental health is currently unknown, but there are many recent studies across the globe which have worked quickly to address this phenomenon.

Death Anxiety, or thanatophobia, is one specific lens through which SARS-CoV-2’s impact on mental health has been examined recently. The American Psychological Association defines death anxiety as “a persistent and irrational fear of death or dying” (APA Dictionary of Psychology). Death Anxiety can include many fears engrained in the act of dying, including fear of death itself, fear of the dying process, fear of the unknown, and fear for the well-being of loved ones, among others (Sinoff, 2017; Zhang et. al, 2019; Lázaro-Peréz et. al, 2020). In this paper, I will evaluate the risk for death anxiety in the context of the SARS-CoV-2 pandemic, specifically addressing severely impacted countries that have recently published studies related to death anxiety in their population. I will also address the presentation of death anxiety and its consequences and evaluate possible options to mitigate and alleviate fear of death given the current circumstances.

Though death anxiety is not classified as a distinct disorder by the Diagnostic and Statistical Manual or Mental Disorders (DSM-5), it may manifest in patients similarly to other anxiety or depressive disorders. While it is normal to have some anxiety surrounding death and dying, people with thanatophobia will experience extreme anxiety or fear related to death, separation, or worry for loved ones when they consider their own mortality to a point when these symptoms interfere with the person’s daily life (Thanatophobia, 2020). There may also be physical indicators of fear and anxiety such as dizziness, difficulty making decisions, paranoia, insomnia, and confusion, among others (Holland & Legg, 2019). According to the DSM-5, thanatophobia is diagnosable if the fear arises almost every time a person thinks about dying, if the fear persists for more than 6 months, and if the fear gets in the way of everyday life or relationships (APA, 2013).

Prior to the 2019 outbreak of the novel coronavirus, studies examining the prevalence and impact of death anxiety were largely focused on elderly populations. As older individuals are statistically more likely to pass away, many researchers hypothesize these individuals will be the most at risk for developing a fear of death as they approach the end of their lives. Because elderly populations are predicted to be the fastest growing demographics for developed countries (United Nations, 2019), the prevalence of death anxiety is expected to increase along with this expansion. However, while many older individuals do suffer from thanatophobia, people at all stages of life can experience extreme anxiety when contemplating mortality.

Several studies have examined possible factors that might influence the development of death anxiety in an individual. Perhaps unsurprisingly, these papers have centered on phenomenon such as cultural values, religion, and self-perception as possible predictors of thanatophobia. Terror Management Theory (TMT), developed by Greenberg, Pyszczynski, & Solomon (1986) posits that a primary correlate to the presence of death anxiety is an individual’s self-esteem levels and ability to maintain a memorable self-image in the face of outwardly terrors. Multiple meta-analyses support this connection, finding death anxiety significantly correlated to levels of self-esteem and purpose in life (Missler et. al, 2012; Fortner and Neimeyer, 1999). Other empirical studies, however, find no correlation between the two variables (Maheshwari, 2019) Gender links also seem to be largely inconclusive, with some studies reporting a strong connection between female gender and anxiety (Elizarrarás-Rivas et. al, 2010; Missler et. al, 2012; Depaola et. al, 2003) and others reporting no significant correlation between the two variables (Jong et. al, 2019).

Culture and religion are two factors which have been some of the most explored in relation to death anxiety. In many countries, culture, religion, and death are intrinsically tied, with major religious rites and social ceremonies publicly acknowledging and appreciating death. The Torajan ceremony of *Ma’nene* is one profound example of death appreciation in culture. In the Torajan culture, aging is seen as bringing one closer to *puya* (heaven) and love for lost family members is appreciated annually in a ceremony known as *Ma’nene.* In fulfilling *Ma’nene,* families will exhume the bodies of their deceased relatives for cleaning and may also pose with their deceased loved ones and communicate with them as if they are still on the Earth. A study completed by Eka (2018) sought to examine how these cultural and religious rites related to death might affect fear of dying or death in older individuals. Perhaps unsurprisingly, after completing a survey of middle age and elderly Torajans still completing the *Ma’nene* ritual, Eka (2018) found cultural value to be significantly negatively correlated to aging anxiety, with the individuals more involved in the annual rituals having lower death anxiety than those who don’t participate as often.

In a separate study examining religious participation and consequences on death anxiety, Maheshwari and Mukherjee (2019) analyzed the effect of the *Magh Mela* ritual in India on elderly participants of *Kalpvas*. The *Kalpvas* is a one-month stay at the bank of the Sangam away from family members and material belongings featuring a variety of religious practices and rituals. The purpose of this ceremony is to remove the individuals from the cycle of birth and rebirth, and, after twelve consecutive years of participation, the elderly participants may achieve a meaningful death. After completing their study, Maheshwari and Mukherjee (2019) determined that individuals who completed more years of the *Kalpvas* were less likely to experience death anxiety. This negative correlation was attributed to the annual reminders of mortality, which allowed participants to accept their death more readily. An interesting facet of this study, however, is the aspect of self-isolation. Though participants were removed from their families, as many were and still are isolated from their loved ones in the present pandemic, these participants found instead greater community bonds in their fellow *Kalpvasis* (Maheshwari and Mukherjee, 2019). Converse to these two case-studies, however, other literature denies the connection between belief in God(s) or the afterlife and death anxiety (Falkenhain and Handal, 2003; Sinoff, 2017).

In addition to the possible effects of cultural participation, the mass spread of disease and the effects can also impact the intensity of death anxiety in individuals. Prior to the SARS-CoV-2 outbreak, researchers were able to link other viruses like the Spanish Flu and the H1N1 influenza to increases in death anxiety in medical professionals and family caregivers. Elizarrarás-Rivas et. al (2010), for example, investigated the psychological responses of family providers of patients in the Intensive Care Unit (ICU) with suspected influenza A/H1N1 and found a high prevalence (71%) of moderate death anxiety in these caregivers, though stress and depression levels in most individuals (~90%) were either low or nonexistent (Elizarrarás-Rivas et. al, 2010). Another study examining the H1N1 outbreak in Japan in 2009 noted the importance of trust and the provision of information in improving the mental health of healthcare providers and motivating superior care of patients (Imai, 2020). With this background knowledge about the possible cultural and contextual influences on death anxiety, recent explorations investigated the relationship between the SARS-CoV-2 pandemic and death anxiety can be elucidated.

Many countries were severely impacted by the SARS-CoV-2 outbreak, suffering many deaths in their population. Unfortunately, travel policies, the ease of transmission, and the lack of knowledge surrounding the virus allowed the disease to spread rapidly, often overwhelming the capacities of hospitals and other care units. As a result, death anxiety takes on another dimension in care workers in these over capacitated areas: the added burden of lack of PPE, increased depersonalization, and high levels of physical and emotional exhaustion. These effects, and others, are elucidated by Lázaro-Peréz et. al. (2020) in their investigation into death anxiety levels in Spain for the month of August 2020. In March, cases in Spain reached their first peak, with new diagnoses reaching almost 9,000 per day. After this peak, cases drifted down under 1,000 per day, until July, when a second rise in cases occurred, and continued increasing until its current peak of about 20,000 new cases per day (Dong et. al, 2020). Because the survey of medical workers in Spain was completed right as cases were beginning to rise again, Lázaro-Peréz et. al. (2020) were able to analyze the relationship between SARS-CoV-2 stress and death anxiety to new cases in real time. Of the over 2,000 participants, 69.2% were assessed as currently experiencing a moderate form of death anxiety, however, instead of fears associated with the death of oneself, the majority of individuals experienced higher levels of fear for death of others and the process of dying for others (82.1% and 78.2%, respectively).

Other studies have further confirmed the prevalence in death anxiety in healthcare workers during the SARS-CoV-2 outbreak. Similar to the cases in Spain, cases in Iran have also recently risen, with a current peak of about 9,000 new cases per day, however, there was a smaller spike in cases between March and May (Dong et. al, 2020). In a study investigating the mental health of nurses in Iran during this initial spike, Galehdar et. al, (2020) determined that another factor affecting the mental health of nurses, during the initial spike, was not being able to care for those who were dying. Furthermore, in a multicultural survey completed by Gokgemir et. al. (2020) in the wake of SARS-CoV-2, Death anxiety in family physicians was negatively correlated to to extraversion, conscientiousness, emotional stability, openness to experience, satisfaction with life and positively correlated to perceived stress. Notably, there was no significant difference in death anxiety in family physicians in response to SARS-CoV-2 in the eight countries examined (Gokgemir et. al, 2020). The combined results support the association between the anxieties of mortality and the rapid globalization of SARS-CoV-2, especially those countries with high spikes in cases.

In addition to these country-specific case studies, other investigations have also supported the connection between isolation and “coronaphobia” and death anxiety. Isolation, for example, was found to be a contributor to increased anxieties in elderly populations in the UK (Brooke and Clark, 2020). Notably, this was mitigated by the use of social media, which may have served as a community-building support system for these individuals over 70. Furthermore, in the United States, experiencing “coronaphobia”, was a better predictor of death anxiety above all sociodemographic explored, emphasizing the correlation between the two phenomena (Lee et. al, 2020).

Despite the high levels of death anxiety and stress in connection to the novel SARS-CoV-2 outbreak, many papers have included recommendations to try to limit the mental health burden on family members and healthcare workers. In order to combat death anxiety and increased stress in medical providers, Galehdar et. al (2020) recommended virtual educational programs around death for these individuals. Programs such as death cafés can reduce death anxiety by encouraging participants to have meaningful discussions about death and evaluate the meaningful aspects of their life. Other studies further support the recommendation for accurate evaluation of mental health issues in healthcare workers (Gokdemir et. al, 2020; Láxaro-Pérez et. al, 2020).

In this essay, I have demonstrated how SARS-CoV-2 has been correlated to death anxiety and other mental health conditions in countries around the world, specifically impacting health care workers and other family providers. This anxiety can stem from many factors of the disease, including fear of the virus itself, fear of the death of oneself or loved ones, lack of knowledge of the disease, and the effects of isolation as mandatory quarantines are imposed. Though this study features many recent publications, I was limited by the availability of data in relation to SARS-CoV-2 as the virus continues to affect countries around the world at varying rates. While I was able to provide multi-cultural context for death anxiety and the effect of SARS-CoV-2, completing in-depth analyses of specific countries was hindered due to a delay in these publications. Ultimately, however, the studies I researched advocate for a greater understanding of the mental health of healthcare professionals, to limit stress in the face of unknown health conditions and increase death awareness through specific training activities and the encouragement of positive coping strategies.

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