

## Online Social Capital and Psychological Well-being among Chinese Women during the COVID-19 pandemic: A Cross Sectional Study

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### ABSTRACT

*The COVID-19 pandemic has caused social and economic disruptions globally. Such globally spread outbreaks have been noted to result in considerable mental health issues. The global COVID-19 pandemic has been accompanied with containment measures such as social and physical distancing, isolation and restriction of movements. Physical social connections have been identified as major contributors to positive mental outcomes. COVID-19 containment measures have restricted such social connections and elicited various responses which have adversely affected emotional and psychological well-being of the global population. The extent of the impact of such containment to the psychological well-being is not fully known but it is already at a considerable level. Different interventions to alleviate the mental sufferings are being tested. China as the country to report the first coronavirus disease case has had considerable mental health issues due to various factors surrounding the pandemic. As social connections have been forced to adopt digital platforms, this cross-sectional study aims to examine the effect of online social capital on the psychological well-being from the perspective of Chinese women. Data were collected through a review of the literature. The results of the study pointed towards the dynamics of mental health due to global health crises in a digital era. It will help in rapidly developing innovative digital social services that tap into the online social capital and promote positive mental health outcomes for not only the Chinese women but also global psychological well-being now and in the future.*

*Keywords: COVID-19 pandemic; social capital; psychological well-being; social distancing; social isolation*

### INTRODUCTION

A World Health Organization's (WHO) situation report shows that in late December 2019, an outbreak of an unidentified flu like disease was reported in the Wuhan region in the Hubei region of China (WHO, 2020). Though, the cause of the disease was not initially known, test results from independent laboratories identified the causative agent as a novel coronavirus (nCoV) (Lee & Piper, 2020). The virus was first described as a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) with the resultant disease termed as the coronavirus disease 2019 (COVID-19) according to the WHO. Various corona viruses have been identified before such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) (Al-Osail & Al-Wazzah, 2017). They have been associated with illnesses ranging from common cold to severe illnesses with most of the illnesses viewed as self-resolving. However, the coronavirus 2019 was identified as a novel strain as it had not been previously identified in humans or thought to cause mild or severe illnesses in humans (Dogra et al., 2020). The lack of sufficient data on the disease's reservoirs, rate of transmission, and actual clinical severity led to the fast spread of the disease across China and other nations. The disease spread rapidly creating a new global pandemic (Handayani et al., 2020).

As the COVID-19 pandemic caused havoc across the globe, the WHO proposed drastic measures to help manage the spread of the diseases. The most commonly suggested and adopted strategies to contain the spread included strict quarantine and isolation of patients, social distancing and hand hygiene, restriction of cross border travels, and restriction of both local and international non-essential, border control, extensive testing and contact tracing (Cirrincione et al., 2020; Davalgi et al., 2020; Lee & Piper, 2020). Hospitals among other

healthcare preparedness and lockdowns have also been adopted as extreme measures to contain the spread and impact of the COVID-19 pandemic. Such contamination and disease spread management strategies totally disrupted normal social life (Gupta et al., 2020; Jayakumar et al., 2020; Osuizugbo, 2020). Physical social interactions have greatly been reduced and moved to digital social media platforms. The social changes based on the interactive nature of humans have contributed to the global rise in psychological distress. The closing of international borders, lockdowns imposed on cities, regions and entire countries were unaccustomed with the modern era (Thomson & Ip, 2020). The unfamiliarity of the public health measures that have been adopted from the perspective of the current generation, have been viewed as infringement on personal freedoms (Burlacu et al., 2020; Hong et al., 2021). Thomson and Ip (2020) argued that the extreme COVID-19 measures adopted by government were impending authoritarian governance citing the widespread erosion of democracy, civil liberties, fundamental freedoms, healthcare ethics, and human dignity. The containment strategies have resulted in large and growing financial losses, loss of lives, and conflicting messages from authorities. These have become the major stressors that are much contributing to the widespread emotional distress and increased risk for COVID-19 related mental illness. The growing emotional distresses due to the adopted measures have potential to create a human mental health crisis in the long run with more devastating public health impacts than COVID-19 pandemic. Despite all the containment measures put in place, the COVID-19 epidemic still remains a global health threat. Infection numbers and death cases keep on rising with new variants of the disease been detected across the globe (Gand et al., 2021; Plante et al., 2021; Sah et al., 2021), the global recovery from the pandemic remains much unknown.

In view of the uncertainty created by the spreading COVID-19 and the emergency of new variants, uncertain ending of lockdowns and adopted measures, mental health is becoming a serious public health problem (Canet-Juric et al., 2020; Petrocchi et al., 2020). Other than the measures taken to curb the spread of the disease, the actual COVID-19 pandemic is likely to function as an important stressor as it creates a state of chronic anxiety as people feel they have lost control over their lives with growing uncertainty of future events (Amanzio et al., 2020). In literature, public health emergencies have been linked to mild to severe mental health outcomes. Just as in the cases of political violence and humanitarian emergencies, de Jong et al. (2015) notes that epidemiological prevalence rates due to discrepancies in public health systems available human and material resources impact on individual and family needs. According to Pfefferbaum and North (2020) health emergencies created a lot of fear and confusion, feelings of emotional isolation, victimization and stigmatization of the affected. Fear has been noted as the most prevalent of all negative feelings associated with the COVID-19 pandemic (Amanzio et al., 2020; Lima et al., 2020). These health outcomes are linked to associated factors including associated economic losses, loss of income and widespread closures of public social spaces such as schools.

China has been one of the hardest hit countries since it reported the first cases of the novel coronavirus 2019. Just like any other country in the middle of the COVID-19 pandemic struggling to meet the mental health of the population, China has and is facing mounting pressure as new stressors linked to the pandemic emerge. China as highlighted by Wang & Tang (2020) has put efforts to sustain the mental healthcare programs for the population to meet the already notable and developing mental health crisis. The mental health burden associated with the COVID-19 pandemic within the general population has reached considerable levels (Lai et al., 2020). Despite the progress achieved by the Chinese government in promoting social mental healthcare infrastructure and service delivery systems, the prevalence psychological distress within the population is increasing. There is growing demand to urgently formulate and implement mental health interventions especially for the at-risk populations.

According to literature, women in all disasters and humanitarian crises and emergencies are considered to be at-risk populations. Women are more susceptible to social, physical, psychological and economic vulnerabilities than any other population group during disasters and pandemics (Marshall et al., 2020; Nelson et al., 2020). Osorio and Oliver (2017) drawing evidence from the Ebola crises note that international health disasters lead to an increase in gender inequalities placing women at higher risk. The COVID-19 pandemic has further highlighted the gender-based vulnerability during health crises with many women living in psychological and a traumatic life (Rodríguez-Rey et al., 2020). Notably, the conditions set to manage the spread of the pandemic such as social distancing have further worsened already existing states of social isolation, loneliness and inadequate community interactions among Chinese women (Wang & Tang, 2020). China is among most urbanized nations globally. The urban lifestyle setting, the Chinese sociocultural environment, and demographic structures that define physical social interactions have been interrupted by the pandemic further fueling the mental health crisis.

Various studies have linked and framed social capital as an essential factor of mental health (Anwar et al., 2020; Hamano et al., 2010). However, research has not yet explored the role of social capital in psychological well-being in the context of COVID-19 in online non-physical environments. This cross-sectional study examined the relationship between online social capital and the psychological well-being among Chinese women during the COVID-19 pandemic. It sought to suggest public health practices, methods, tools, and social techniques that can be adopted and implemented in online communities to improve the mental well-being of women during the COVID-19 pandemic. The role and impact of online social capital on the well-being of Chinese women during the COVID-19 pandemic have been identified through the empirical questionnaire study. Therefore, this research will have important implications for future policy and intervention development concerning the mental health of women and other vulnerable populations during pandemics and other disasters both in China and globally.

## LITERATURE REVIEW

### SOCIAL CAPITAL IN THE INTERNET ERA

Social capital has been a research theme in economics, and in recent times becoming a major research topic across different sociological fields. To express the importance of social capital in modern research, Rønning (2007) claimed that scientific and scholarly progresses achieved so far could have been impossible without the existence and use of social capital. However, Lesser (2009) argued that the multi-dimensionality of social capital has not been achieved as there lacks a degree of theoretical integration across disciplines. Gannon and Roberts (2020) has provided empirical evidence that the social capital theme is multi-dimensional by expressing the positive association that exists between social capital and health and other dimensions of well-being.

Various social scientists have defined social capital in the past from two perspectives: the view of social capital as a resource within networks that is facilitated by individual and groups actions and direct and in-direct links within that network and the perspective of social capital as external capital linked to a focal actor that define the structures of collective actors such as groups, organizations, or even nations and distinguish them from individual actors (Lesser, 2009). This perspective frames social capital as resources that give collective actors cohesiveness and collective benefits from such cohesion. From the internal resources view of social capital, for example, Fukuyama (1997) defined social capital as “the existence of a certain set of informal values and norms shared among members of a group that permit cooperation among them.” Dekker and Eric (2001) are of the view that social capital is

“fundamentally about how people interact with each other.” Generally, from the internal and external perspectives, the idea behind the concept of social capital can be viewed to develop from the linkages of individual social ties within a broader social structure. Though the concept of social capital has been well developed in other fields, out of the available health-related literature, there lacks a common conceptual framework that identifies the sources, utilization, benefits, risks, and incidental expenses of social capital in health and well-being.

#### COVID-19 AND MENTAL HEALTH AMONG WOMEN

Mental health though mostly from a positive perspective is a multidimensional concept which covers on the positive and negative aspects of mental health (Nyqvist et al., 2013). Nyqvist et al. (2013) further elaborated the different aspects describing positive mental health as that lies with acceptable levels and definitions of well-being, supportive resources, and social networks, while negative mental health refers simply to mental illness. The COVID-19 pandemic measures though put in place to manage the spread of the disease; they have much exacerbated health inequalities (Sardar et al., 2020), and threatened a global health crisis especially for vulnerable population groups (Rodríguez-Rey et al., 2020).

Various recent studies have linked the COVID-19 pandemic to the considerable rise in mental issues among women. According to Bilajac et al. (2014) the outcomes of mental health are and interplay between the various domains of personality such as optimism, control over life, social involvement for this social capital, and socio-economic status. The socio-economic impacts of the coronavirus 2019 pandemic are been witnessed in both the developing and developing world. Salehi et al.(2020) investigated the relationship among fear and anxiety of COVID-19, pregnancy experience, and mental health disorder in pregnant women. The research authors noted that fear and anxiety levels increased among pregnant women. Lai et al. (2020) found that frontline health care workers during the COVID-19 in China, especially women, experienced psychological burden as they interacted with COVID-19 patients. Farrell et al. (2020) based on the findings of a study on the impact of the COVID-19 pandemic on the perinatal mental health of women concluded that psychological impact of the pandemic, though now considerable among vulnerable groups, is still underreported been reported on psychological effects among vulnerable groups. An argument by Kawachi and Berkman (2001) leveraged on gender differences in support from available social support network and systems can help understand the higher prevalence of psychological distress among women compared to men during the COVID-19 pandemic. In generalized and less diversified results of a study on knowledge, income and attitudes towards the COVID-19 pandemic, Zhong et al. (2020) argue that most Chinese residents of a relatively high socioeconomic status, particularly women, bear sufficient knowledge on COVID-19 thus optimistic and bear positive attitudes towards COVID-19. However, according to the authors, such findings are biased against populations of a low socioeconomic status.

#### FACTORS OF PSYCHOLOGICAL DISTRESS DURING COVID-19

The prevalence of mental health risk factors and associated symptoms among the Chinese population during the COVID-19 pandemic are readily notable among the general population. Mental health symptoms, based on various studies, can be summarized to mental states related to fear, depression, anxiety, insomnia, suicidal thoughts, and acute stress (Gonçalves et al., 2016; Sawhney et al., 2018; Wong et al., 2019). Depressive symptoms have been studied the most as major indicators for negative aspects of mental health (Forsman, 2012; Nyqvist et al., 2013). In the context of COVID-19 pandemic, symptoms of mental health have been identified as state of residence, psychosocial characteristics, and levels of anxiety, depression, anger, cognitive function, and fatigue (Reading Turchioe et al., 2021).

Factors of psychological distress during the pandemic have been largely linked to household income, lifestyles, and interplay between general stressors and other determinants of public health. The economic impact of the globalized COVID-19 pandemic is evident in all world economies and pushed many into recession and currently facing the threat of an economic depression (Barua, 2020). Rise in poverty levels globally have been evidenced with the growing uncertainty surrounding the COVID-19 pandemic (Cuesta & Pico, 2020; Han et al., 2020; van der Merwe, 2020). The compounded effects of loss of income and the adverse health outcomes have been identified as top contributors to the psychosocial state of the populations (Wang & Tang, 2020). The interplay of general stressors and existing chronic conditions have been noted to add to the psychological distress during COVID-19 pandemic. Insomnia, largely associated with mental health has been noted to act as a modifier of pain, fatigue, and the quality of life and comorbidities which patients struggle with.

Xenophobia and racially motivated attacks during the corona virus have led to an increase in mental health issues especially for Chinese nationalities and people of Asian descent (Cheng, 2020). A lot of misleading information in the media against China and the Chinese people has led to xenophobic and against people of Chinese origins. Chinese people have reported cases of xenophobia, prejudice, racism and racial attacks especially in the Americas and part of Europe (Agarwal & Sunitha, 2020). The sharp rises in racial discrimination and prejudice among the Chinese people globally have increased fear and psychological distress (Rzyski et al., 2021).

#### SOCIAL CAPITAL AND WOMEN'S MENTAL HEALTH

Sun and Lu (2020) in study of the relationship between social capital and mental noted that research is lacking on social capital and mental health in the context of COVID-19 and how various sub dimensions of social capital affect mental health. Psychosocial research evidence has shown that social ties play a crucial and beneficial role in the development and maintenance of psychological well-being (Kawachi & Berkman, 2001). In a study conducted via systematic review to establish the impact of social capital interventions targeting elderly people, Coll-Planas et al. (2017) found that social capital interventions had mixed effects with the interventions showing positive impacts on the quality of life, well-being and self-perceived health among the aging however, such interventions showed no effects on loneliness, mood and mortality. Morozumi et al. (2020) concluded that enhancing social capital had positive outcomes for the mental health of pregnant women.

However, existing research show that social ties and mental health outcomes are not always positive. Social capital may add to negative stress reactions, psychological well-being, and psychological distress among individuals. Despite the existing collective arguments on the positive outcomes of social capital and connections on mental well-being, Kawachi and Berkman (2001) noted that that take maybe flawed and counter argued that social ties are paradoxical and may increase symptoms of mental illness among women with low resources, in cases where such social ties come with obligations to reciprocate social support to others. Rugel et al. (2019) in a study exploring the impact of exposure to natural space, sense of community belonging, and adverse mental health outcomes across an urban region found that the reduction of stressors was directly linked to an individual's sense of belonging to open social capital spaces. Dong et al. (2020) suggests that authorities need to formally integrate public mental health interventions into public health preparedness and emergency response plans. There is a need to explore the impact of emergency public health states and response measures in the modern and digitally advanced times on the psychological well-being of the public in order to improve post-pandemic mental health outcomes.

## FINDINGS

The review emphasized the importance of both psychiatric cares, especially for underprivileged communities, and social value enhancement to mitigate the outbreak's negative psychological impact. Another study from Japan (Shigemura et al., 2020) underlined the impact on the economy of COVID-19 as well as its consequences on well-being, and even the predicted high negative emotions and anxiety responses among the wider public, such as resource collecting and storing. Unfortunately, there were no expressive studies of this type available from other nations. The rate of all indications among females was relatively more significant than those of males. Majority of women reported experiencing increased despair, solitude, and anxiety throughout the pandemic. In total, the larger age groups had a considerably high chance of expressing futility, isolation and depression than those in the younger population. Women had more significant changes to report all three results, but the opportunities for depression alone were substantial. Family income was incredibly consistent and damaging with expressing despair, but not with crippling depression.

Individuals working in middle-class jobs and those without employment or studies had increased chances of experiencing despair and depression. The link with the job was substantial amongst people in a society of pain. The relationship with the job was important for women in terms of anxiety. Smoking was linked with solitude, but only among men was adversely caused by stress. A helpful link between drinking alcohol and smoking, however, was being found. The Chronic diseases were connected with greater chances of perceiving male soreness and expressing both male and female depression. The chances of expressing despair, stress and depression were higher for individuals in metropolitan settings. According to Northern china, Wuhan province had a higher probability of registering both males and females on all three objectives. At the same time, Guangzhou has higher likelihoods of women who experience loneliness.

## DISCUSSION

Depression and anxiety, which is caused by an altered version of experienced physiological effects and changes, might be one of the major psychological well-being issues. However, during an epidemic, especially in the context of erroneous or misleading media reports, its health implications became extreme. This cross-sectional study found the highest incidence of personality anxiety, stress, and insomnia among female in several cities throughout China during the COVID-19 lock-down, with situations involving these symptoms on a continuous or intermittent basis. Additionally, a sexual selection, substantial, robust, and positive relationship across family attachment, anxiety, and depression, particularly among female, was discovered. In particular, the rate of reported despair, loneliness, and sadness for females were more than for males, meaning that the sensitivity to mental health effects of the crisis was female gradient. There is an increasing volume of data about the influence of the sickness on mental well-being, but the sexual variations in depressive symptoms are not very obvious. However, in the earlier findings, psychiatric diseases, particularly that of seriously depressed women, were higher (Picco et al., 2017). In the background of COVID-19, females are at increased danger of depression problems due to the different frequency and economic loss of Domestic and Family Violence. In addition, pregnant women struggling to receive standard prenatal care often have psychological obstacles that they and their provider's disregard. It also proposes that future studies emphasize these topics to understand better the sexual gap in the result of COVID-19 in mental well-being.

In addition, this study showed that a widespread sense of hopelessness, alone, and sadness is connected with several cultural and economic characteristics. It's discovered that the chances

of despair, depression, and loneliness were significantly higher in the older social classes than those of the older age groups, where the relationship was flipped. Generally speaking, this study suggests that marrying, living in a high-income household, and earning in a High Paid occupation all to safeguard these following goals. The current literary series showed the physical and mental illnesses caused by financial difficulties (Acri et al., 2017). Another analysis depends briefly on the construction of despair (Jones et al. 2018, Evans, 2016). The crossroads between emotional and economic well-being are managed by monetary gain. However, this result should be taken with precaution, as we only obtained data on essential revenues that could not represent the individuals' actual financial status. It should also be noted that household incomes have not been significantly linked to loneliness and depression. Although the connection with socio-economic background and psychological health is pretty established, our knowledge is enriched by the difference that yearly household incomes are more susceptible to a sentiment of despair.

Inside another Indian study, over 80% realized the necessity of mental health care, although the level of knowledge and readiness for precautionary action for COVID-19 contamination was sufficient (Dalal et al., 2020). One of the key effects of social exclusion, which again controls the expansion of COVID-19, is the formation of a sense of solitude in people who are inherently highly sociable in character (Brooks et al., 2020). The neuroscience of psychological distress informs us that solitude and bad feelings can lead to a continuous mental loop that can lead to higher suicidal trends, separate from other effects (Bzdok & Dunbar, 2020). These findings have consequences for sustainable development. First, in the COVID-19 pandemic social power framework, latent buildings should contain a technological application for identifying community residents of older persons at higher risk of depression. Secondly, conceptual, social capital can be enhanced by establishing confidence and cooperation between local beliefs. Improving the involvement of older persons in society social voluntary work and citizenry is an appropriate mechanism of fostering fundamental social capital. Older people should be encouraged to participate in such events, particularly for women, if these operations do not raise the risk of exposure of older people to COVID-19. This tactic is also an excellent way to address the community's scarcity of human capital during the COVID-19 pandemic. Finally, emerging initiatives on human support should highlight the cognitively social value. Accumulative evidence also highlights the optimistic view for COVID-19 psychological health implications, frequently recorded but not confined to the most affected group of medical personnel (Szcześniak et al., 2020). People suffer enormous stress and anxiety for various causes, such as government limitations or lock-in, new infections and death reporting from the media, fear of job losses and illnesses, leading to mental, psychological distress, sadness, and sleeplessness (Rubin and Wessely, 2020). The growth of unpleasant emotions and sensibilities such as anxiousness, despair, and fury during this epidemic may be measured by the outcomes of roughly 4000 internet users in China (Li et al., 2020)

Among the surviving papers, one noted that the widespread nature and transmitted of COVID-19 might result in a proper mental well-being crisis to females f, particularly in areas with intense workloads (Dong & Bouey, 2020), necessitating both significant psychological and social crisis treatments and the potential integration of mental health care into emergency plans. However, according to a related report (Duan & Zhu, 2020), while Western countries have integrated treatment programs into their guidelines for infectious diseases, nations such as China have not yet done so, leading to the establishment and perseverance of strain dysfunction affected individuals. In comparison, Bao et al. (2020) illustrated the facilities that were already obtainable in China and as well published several approaches for the general public to reduce outbreak-related anxiety: assessing the accuracy of data, increasing welfare help, prevention programs disease-related, sustaining as everyday life as possible while complying to safety precautions, and the use of. According to them, such strategies would

enable society to respond adaptively to the COVID-19 pandemic. Similar tactics were reaffirmed in a Singaporean paper (Ho et al.,2020), which highlighted the role of increased mental health screening, strengthening links between patients in the clinical services, and getting adequate data to the public to reduce cognitive distortions reactions such as "panic" and anxiety about the infection and its distribution. Additionally, a short review article (Lima et al., 2020) emphasized the importance of stress as the dominating emotional connection to a pandemic and the importance of proper preparation for medical staff and the best use of new technologies in the delivery of psychiatric treatment.

Because of the facts, it is crucial to give our women the appropriate support for mental health. Therefore, we urge that psychiatrist participate actively and continuously in policymaking tasks in this vital era (Moccia et al. 2020). Furthermore, to respond to the general people's demands during this pandemic, internet or mobile social education should be considered to promote mental health treatments (Zhou et al.2020), such as psychological treatment and cognitive behavioural therapy dependent on consciousness. Cognitive-behavioural therapy focuses on using several meditation activities to recognize the needs of inductive or deductive perception and helps to alleviate stress in persons with weak physical illnesses. Moreover, social channels are suitable for separating people and can help them share their problems and challenges during an epidemic to relieve their worry and sadness (Ho et al. 2020). Concerning more specific treatment interventions, the initiatives include the formation of teams of professionals competent in addressing mental illness (Duan & Zhu,2020), the skills development of medical workers in essential features of psychological (Duan and Zhu,2020), using research studies to evaluate mental illness (Liu et al., 2020), developing online maps (Yao et al., 2020). Such solutions proposal the expectation of readily available mental health treatments without a rise in the incidence of illness

## CONCLUSION

The study suggests that surviving methods, like enhancing family bonds, can help prevent the impacts of COVID-19 segregation policies on psychological health. The scholars also suggested internal control mechanism, particularly in institutes where education about the significance of reinforcing family relationships, communication with siblings, enjoying time, and co-operative practice can significantly lower the implications for the health of COVID-19 lock-down. Various socio-economic and lifestyle aspects have been identified, particularly occupation, family revenue, smoking, consuming alcohol, and current serious illnesses. While the data are border and therefore, no causative assumption from relationships can be established, our study is essential in contributing to the available research on psychological health among populations not immediately impacted by the crisis but among the stable individuals in the society.

Finally, throughout the COVID-19 period, there is a significant frequency of self-reported stress, sadness, and insomnia among women. Women who were locked up with their families become less prone to mental health concerns as a more substantial household would seem to be good at minimizing mental health implications, particularly for women. Significant studies and initiatives at institutes to enhance mental well must be strengthened.

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