Review

Unintended Consequences of COVID-19: The Rise of Anti-Asian Violence and Integrative Medicine

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Posted Date: 13 November 2025

doi: 10.20944/preprints202511.0934.v1

Keywords: COVID-19; unintended consequences; anti-Asian violence; integrative medicine; global health; Global North and Global South

 doi:10.20944/preprints202511.0934.v1

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Unintended Consequences of COVID-19: The Rise of Anti-Asian Violence and Integrative Medicine

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Abstract

Recent globally important events have accelerated the need to redefine ideas of health, healing and well-being. The COVID-19 pandemic has highlighted the fragility of socio-economic and health care systems, questioning the hegemony of the Global North in addressing global health issues. In times of global interconnectedness, postcolonial dynamics and calls for integrative medicine to address complex health issues that cannot be effectively managed by a single biomedical framework, this review article aims to foster dialogues across multidisciplinary perspectives that engage in questions of health and well-being. By focusing on unintended consequences of COVID-19, specifically regarding anti-Asian violence and the important role of traditional medicines in contributing to an integrative medicine that enhances global health care systems, this article endeavours a deeper theoretical understanding of why certain issues exist as they do, and how they occur, which can provide the basis for predicting their (re)occurrence and for informing meaningful intervention efforts.

Keywords: COVID-19; unintended consequences; anti-Asian violence; integrative medicine; global health; Global North and Global South

1. Introduction

As the World Health Organization (WHO) declared COVID-19 a worldwide pandemic on March 11, 2020, immediate public health responses ranging from masking, social distancing to lockdowns were recommended for everyone to stay safely at home. However, historically vulnerable groups such as the elderly, women, racialized and low-income groups within the Global North and Global South, were disproportionately impacted [1–4]. The COVID-19 pandemic has unveiled that health inequalities exist not only between high and low-income nations but also within high-income countries like Canada where certain populations are more vulnerable to contracting infectious diseases and to experience higher negative outcomes.

At the outset of the COVID-19 pandemic, the elderly residing in Canadian long-term care (LTC) facilities were the first major casualties not merely because of their age and disease susceptibility, but mainly due to systemic issues. Most elderly residents were under the care of precariously employed Personal Support Workers (PSWs) who were overworked in understaffed facilities and also underpaid. Being a mobile workforce, predisposed PSWs to the transmission as well as to the spread of the COVID virus to themselves and to elderly residents they supported [4]. Like other essential workers such as grocery clerks, warehouse, custodian and health care workers, income instability meant that many low-paying workers could not choose between financial security and personal safety during the pandemic. Similarly, a main issue that caught the attention of global health authorities was the rise of gender-based violence and particularly, intimate partner violence around the world, leading the UN Commission on the Status of Women (CSW) to declare gender-based violence the "Shadow Pandemic", and the World Health Organization (WHO) coined it a "Twin Pandemic" [5].

 doi:10.20944/preprints202511.0934.v1

Worldwide, intimate partner violence was a major unintended negative consequence of COVID-19. The governments' slogan "Stay Home and Stay Safe" did not resonate with many adults and children living in situations of family violence. Home is not always a safe place for many as it is where physical, psychological and sexual abuse occurs. Stringent public health restrictions resulted in lesser avenues of escape, help-seeking and ways of coping for victim–survivors, as community resources such as women's shelters were closed down [6,7]. While gender-based violence was officially recognized as the "Shadow" or "Twin" pandemic, another hidden pandemic that inconspicuously proceeded in countries outside of the epicenter of COVID-19 was the rise of anti-Asian violence. Many scholars have rightly argued that Asian xenophobia, an unintended negative consequence of COVID-19 was not appropriately addressed by different governments because of the prevalent "model minority" myth. This myth presumes Asians to be somehow immune to racism due to their successful integration in overseas communities, particularly in North America, where they are perceived as the epitome of the "American Dream" [8].

Despite major backlashes against Chinese populations for allegedly triggering the spread of COVID-19 as the virus was first identified in Wuhan, China, Traditional Chinese Medicine (TCM), has become a leading example to enhance global health care systems. Key health institutions like the World Health Organization (WHO) have identified the potential of traditional medicines to support an integrative medicine combining ancient wisdom and modern science to address complex health issues. Thus, this review article sheds light on two main issues: 1) A major unintended negative consequence of COVID-19 was the rise of anti-Asian violence, which highlighted ongoing racial and social inequalities that debunk the prevalent myth of "model minorities"; and 2) A major unintended positive consequence of COVID-19 was the increased interest in integrative medicine as 80% of the world population turned to some form of traditional medicine to combat it. I contend that COVID-19 has engendered challenging opportunities to address prevailing racial, health and social inequalities through appropriate policy changes. On the one hand, policy changes are vital to recognize that systemic racism is a crime that cannot not be tolerated. On the other hand, policy changes are essential to disrupt the "myth" that biomedicine is the only legitimate evidence-based modality to effectively solve global health issues.

2. Methodology

This theoretically-informed article is based on secondary research analysis of multidisciplinary literature and policy documents collected from 3 main sources: (1) scholarly, (2) mainstream media and (3) policy databases, retrieved from Google Scholar, Sociological Abstracts, Social Sciences and Humanities Index, PubMed, CBC, CTV News, Toronto Star, New York Times, as well as the World Health Organization (WHO), National Institutes of Health (NIH) and US Food and Drug Administration (FDA) websites. The following keywords were used: COVID-19 health and social consequences; global responses to COVID-19; Anti-Asian violence, and integrative medicine in the Global North and Global South. A purposive sample of 20 citations per year was selected according to the scope of the problems arising within pandemic and post-pandemic years (2020-2025) for in-depth reading to determine which issues would undergo a critical thematic analysis. The literature review was updated by consulting additional sources during the writing process, resulting in a total of 130 secondary sources analyzed in depth, and 90 (or ~69%) of them were included in this article. After completing the content analysis of textual data using NVivo 12, the findings aimed to foster dialogues within and beyond sociology, with other perspectives such as anthropology, science and technology studies, postcolonial and global health studies that engage in questions of health and well-being. As part of this analysis, issues of social justice, social inequities and the biomedical dominance of health care are foregrounded as major lacunae in global health policies addressing unintended consequences of COVID-19. Overall, this critical analysis aligns with a qualitative methodological approach that explores power in social practices by understanding, uncovering and endeavoring to transform conditions of inequity [9]. Quantitative content analysis is valid to systematize large quantifiable data from statistical analysis and controlled experiments; however, it

 doi:10.20944/preprints202511.0934.v1

remains limited in capturing deeper meanings of broader socio-cultural developments and thematic relationships.

3. COVID-19 and the Myth of "Model Minority"

The wave of anti-Asian violence ranging from a 92-year old-man with dementia thrown out of a convenience store in Vancouver, a research fellow from South Korea stabbed on his way to groceries in Montreal and the March 16, 2021 terrorist attack in Atlanta, killing 8 Asian women came as a surprise to many, even though racially motivated attacks against Indigenous and Black communities have been a commonplace, a disturbingly normalized issue. Explaining why these senseless Anti-Asian attacks caught many off-guard at the height of the COVID-19 pandemic, several Canadian news reporters, activists and scholars [10–13] rightly pointed to the "model minority" myth, which assumed that Asians were immune to racism.

The term "model minority" was first coined by American sociologist William Peterson in a 1966 New York Times magazine article entitled: "Success Story, Japanese-American Style" during the civil rights movement [14]. Peterson contrasted the "problem minority", namely Black Americans who struggled with poor health, substandard education and low income with the "model minority" – Japanese Americans who were law-abiding, achieving academic and financial success despite their oppressive experience of internment during World War II. Opponents of the civil rights movement used this narrative to assert that Black people could be successful if they shifted their values and focused on education [11]. This myth has since been applied to East, Southeast and South Asian communities in North America, suggesting that these communities are inherently intelligent, studious, hard-working, and polite, and that these presumably natural traits have led Asian-Canadians and Asian-Americans to be successful, wealthy and less likely to experience racism in comparison to other 'minority groups', thus yielding the illusion of greater proximity to "Whiteness" [13]. The following subsections will critically examine how the "model minority" myth actually obscures four main myths that need to be systematically challenged.

3.1. Myth #1: "Uplift Suasion" and Educational Mobility

I borrow the term "uplift suasion" from Xendi [15] who uses it to describe the fallacy of the "American Dream" that Black-Americans have internalized since the abolishment of slavery and particularly after the Civil Rights movement in the 1960s. "Uplift suasion" refers to individual striving to do better, such as by undertaking higher education and engaging in outcomes-driven occupations to advance economically and socially. By 'flying under the radar' and endorsing a 'not rocking the boat' ideology for social acceptance, it is assumed that individuals imbued with strong willpower and diligence, will be economically successful, influential, and self-made model citizens. However, "uplift suasion" among Black-Americans has encountered major setbacks throughout history. Instead of being socially included and accepted despite hard work, economic success and influence, Black-Americans have faced jealousy, rivalry and backlash. A major early incident concerns what is known as the Tulsa race massacre in the Greenwood district in Tulsa, Oklahoma, a financially successful district, dubbed 'Black Wall Street', in which 300 people were massacred by a White mob that burned all businesses and left more than 10,000 homeless on May 31, 1921. Former US President J. Biden marked the 100th-year anniversary on May 31, 2021 [16]. Upon a second-time election, US President D. Trump shattered the myth of "uplift suasion" by requiring all Diversity, Equity and Inclusion (DEI)-related policies to be removed from American public and private institutions, given concerns that 'racial minorities' are prioritized for key positions through affirmative action initiatives rather than by merit. Ironically, prior to and even following the Civil Rights' movement, specific American laws prohibited Black people from purchasing homes in predominantly White neighbourhoods or from accessing limited-skilled manufacturing jobs that privileged lower-class and uneducated White people [15,17].

Since Asians have been generationally held as a "model minority" because of their alleged hard work, intelligence, politeness, quietude and education, thus epitomizing the myths of "uplift

 doi:10.20944/preprints202511.0934.v1

suasion" and educational mobility to the extreme, such 'model citizens' are assumed to be immune from racism and by default, state policies are considered unnecessary to protect self-made individuals. This rhetoric of personal responsibility is conveniently at its best in a neoliberal state where 'model citizens' are left to fend for themselves despite systematic racial, economic and social inequalities. Evidently, prior to the COVID pandemic, Asians had also been targets of scapegoating, racism and social exclusion during the SARS outbreaks in various countries [18,19]. One may wonder why past SARS-related discrimination and ostracism did not serve as important lessons to better equip contemporary responses to COVID-19. I maintain that the myth of "model minority" is deep-seated, steeped in a long-standing "caste" or racial hierarchy [20] in which regardless of what and how well racialized individuals achieve, they are deemed inherently inferior or diseased. These sentiments can be reignited or amplified at any time, but especially during times of crises marked by deep insecurities, uncertainties and financial strain when scapegoats are sought to justify unexpected or undesirable realities [21]. Thus, irrespective of the significant contributions of Asians within diverse diasporic settings at different historical junctures, they are unable to escape the rigidities of ethnic, class, gender and cultural racism [15]. From the early days of being constructed as the "Yellow Peril" to recent scapegoating for embodying the "China virus" or "Kungflu", it is unsurprising that the "model minority" myth does not shield diasporic Asian communities from the baggage of "Othering" when scapegoats are pursued in their midst to justify the unknown, the undesirable and the unpredictable. To this effect, key policy-making to declare discrimination and systemic racism a crime that cannot be tolerated in society, is paramount.

Additionally, the illusions of "uplift suasion" and educational mobility break down upon further scrutiny, when considering wealth and social inequalities within racialized and immigrant populations. In fact, 20% of Asian populations in North America live in poverty, and experience major barriers to social integration given language, immigration status, professional licensing and other systemic barriers that lock many in menial, and low-paying jobs with limited upward mobility [12,22]. For example, East and Southeast Asian women comprise a significant labour force in low-paying manufacturing, beauty service and massage industries where they may be undocumented immigrants, and experience health and safety concerns, being victims of human trafficking or at a higher risk of contracting chronic ailments like lung cancer due to prolonged exposure to toxic chemicals at workplaces such as nail salons [23–25].

3.2. Myth # 2: Asians as "Buffer" or Intermediary Groups

Historically, by virtue of colonial or national policies, Asians have been accorded a "buffer" status, allowing them to be intermediary groups who could mediate between upper (White) and lower-status groups (Indigenous and Black) in diverse geographical regions. The assignment of this "buffer" status was arbitrarily premised upon a "caste hierarchy" [20] that dates back to European colonization and expansion in settler colonial countries like Canada and the US, and extractive colonial countries such as former African and Southeast Asian colonies [15,20,26]. Settler colonial countries aimed at establishing permanent European settlements with concerted efforts to seize and control Indigenous lands including the complete displacement of Indigenous peoples. Extractive colonial countries were mainly for the purpose of extracting key resources like precious minerals, raw materials and desirable commodities including human labour (slavery) to support European socio-economic interests, without the intent of permanent settlement in colonial settings [26].

According to Wilkerson [20], a "caste hierarchy" still pervades in the contemporary US, dating back to its colonial roots whereby the highest "caste" groups represent White people who by virtue of their skin colour are deemed entitled to the most privileges and benefits in society, followed by intermediary "castes" who act as the "buffer" groups, with fewer rights and privileges. Their alleged closer phenotypical proximity to "Whiteness" on the basis of presumed lighter skin colour (i.e. East, West and South Asians) enables them to rank higher than low caste groups. At the very bottom of the "caste hierarchy" lies the socially constructed low-end or "inferior" caste groups such as

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Indigenous and Black populations due to their skin colour and colonial positionalities as the subjugated, colonized "Others".

Undoubtedly, being accorded a "buffer" status has had ambiguous consequences for Asians in overseas communities. Given their supposed closer proximity to "Whiteness", they were enabled a more independent space in European colonial settings, deriving more privileges than lower caste groups despite experiencing significant economic and other hardships. In both settler and extractive colonial settings, Asians have enjoyed greater mobility and higher economic opportunities than local Indigenous populations, being allowed to establish their own independent businesses that served both upper and lower caste communities. For example, they provided essential services like variety store, laundry and restaurant/pub services in earlier colonial settings. While this "buffer" position may have been politically strategic for colonial authorities to recruit intermediary castes to 'indirectly rule' low-caste colonial subjects in under-served communities with minimal resources [27,28], the increasing presence of "buffer" groups in mainstream societies was also perceived as a threat to underprivileged White upper castes. For example, after railroad construction was completed in North America, many Chinese migrant workers who had been employed in this area, tried to find work in agricultural and industrial sectors or establishing their own independent businesses. However, many White people saw them as direct competitors for scarce jobs during the financial depression of the 1920s, and thus used racial stereotypes and prejudices like labeling Chinese men as opium dealers and addicts who lured White women for sex to villainize them [29]. In Canada, racial discrimination against the Chinese population culminated with the enactment of the Chinese Exclusion Act in 1923, which specifically barred Chinese immigration [30]. In the late 1970s, despite being lauded as intelligent, educated and a "model minority", Asians' presence in Canadian universities prompted a CTV, W5 documentary entitled "Campus Giveaway" that "foreigners" i.e. Asians were "taking over universities" [31]. Still, a 2010 Maclean's magazine article initially titled "Too Asian: Some frosh don't want to study at an Asian university" raised the controversy that elite Canadian universities were "overrepresented" by Asian students, deterring White students from attending them [32].

In a post-pandemic era, anti-Asian racism continues to rise with daily news of Chinese interference, election tampering, intellectual property theft, alleged links between academic research and military operations, and more [33]. Although these allegations warrant investigation, concerns arise when policy efforts are concertedly driven towards safeguarding national interests by presumably curbing security threats to the detriment of academic freedom and multi-site research collaboration between Chinese and non-Chinese scholars on suspicion of "spying". Thus, policy changes are pivotal to address anti-Asian racism as a broader systemic issue and not simply because Asians might represent a 'foreign threat'. Ironically, being a "model minority" has not shielded Asians from racism or backlashes by dominant caste groups, but it has even brought dissent among 'minority groups'.

3.3. Myth # 3: Allyship of Equity-Deserving Groups

Undoubtedly, colonial and national policies have engaged in divide and conquer strategies, pitting even equity-denied groups against each other. In colonial settings, Asians were arbitrarily granted a "buffer" position within a "caste hierarchy" that afforded them higher status and privileges than local Indigenous populations, under the fallacy that they were in closer proximity to "Whiteness". However, their position has consistently remained ambiguous, never fully accepted as equal or "White" regardless of their successful achievements [13]. Since they have been granted greater educational, occupational and residential mobility than most Indigenous populations merely due to socially constructed skin colour, their "buffer" position inevitably fostered resentment from those completely dispossessed by European colonizers. Indeed, as many non-Western nations were decolonized, becoming newly independent throughout the 20th century, Asians who had lived generationally in former European colonies often became unwelcome, being viewed as complicit with European colonization and oppression of local populations. They were resented for having

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benefitted from colonial ruling leading many to be expelled from former colonies such as South Asians from Uganda [34] and ethnic Chinese from Vietnam [35].

Notwithstanding, the persistence of the "model minority" myth predisposes a division between "model" and "problem" minorities, thus perpetuating a "caste hierarchy" in which historically low-ranked racialized groups become construed as inherently 'problematic' incapable of self-responsibilization and by default, requiring state surveillance. Indeed, Indigenous and Black populations are disproportionately criminalized in North America, being overrepresented in prison and court systems including being more victimized by police brutality, harassment and racial profiling [36]. The division between "model" and "problem" minorities not only incites potential conflicts between equity-denied groups but it can also prevent meaningful solidarity or allyship between all equity-deserving groups. More importantly, singling out particular groups as inherently 'model' or 'problematic', diverts state responsibility from providing fundamental resources and community supports to promote every citizen's health and well-being.

3.4. Myth # 4: Internalized Pressures for Individual vs. Collective Responsibility

The myth of the "model minority" is itself internalized and replicated generationally by many Asians themselves, either consciously or unconsciously with unintended positive and negative consequences. Many Asian families have internalized significant pressures to succeed at all costs, as part of systemic, cultural, intergenerational and personal legacies to uphold socially valued grit, education and financial success. This exemplifies what some scholars and political leaders have termed the "Confucian Ethic", following the moral teachings of Chinese philosopher Confucius, who emphasized self-control, self-discipline and obedience to a central authority to achieve a successful life [37]. This assertion has challenged M. Weber's widely popular yet ethnocentric argument of the "Protestant Ethic" that singled out Protestant values and particularly Calvinism as the most superior religion, focusing on individual self-denial, self-discipline and delayed gratification to establish economic success. According to Weber, other religions such as Hinduism in India and Confucianism in China had hindered capitalist development because of their emphasis on traditional, superstitious and mystical beliefs [37]. Weber's ideas have certainly been challenged by contemporary successes in Asian economies whose leaders argue that their economic success is due to the "Confucian Ethic". However, among many Asian immigrant families, internal pressures to succeed in newly relocated areas, follow a strong sense of family pride, allegiance and sacrifice. Often, parents believe they must do everything in their power to ensure their children are successful, gainfully employed in reputable, outcomes-driven positions [38,39]. Interestingly, this type of culturally accepted *modus operandi*, is consistent with a neoliberal state orientation that defers responsibility to citizens to care for themselves and to strive for success. This neoliberal orientation detracts collective responsibility on the part of the state to ensure equal rights, opportunities and supports for all citizens to achieve their full potential. Without ensuring that systematic racial, gender, class, cultural and other forms of societal oppression are addressed, individuals will be held solely responsible or blamed for their own (in)actions.

Expecting individuals to uphold the "model minority" myth without any external social supports creates undue mental and physical strain. Individuals may internalize they have nowhere to turn other than focusing on self-development, and this excessive individualization has major implications on one's mental health as testified by the high suicide rates among Asian youth in high schools and universities [40,41]. As well, internalizing the myth that 'model citizens' are law-abiding, and do not 'rock the boat', prompts many to not speak up about their struggles. This inward focus inadvertently becomes complicit with the same social structures that perpetuate individuals' oppressive conditions such as racism, xenophobia and social inequalities. In other words, if problems are not identified, it will be assumed that they do not exist, and inevitably, no meaningful solutions will be voiced. Having uncovered a hidden, adverse consequence of the COVID pandemic, the following discussion will turn to an unexpected positive consequence of this global health issue.

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4. COVID-19 and the Rise of Integrative Medicine

According to the WHO, 80% of the world's population relies on some form of traditional medicine to address different health issues including COVID-19, despite the global dominance of biomedicine, the most scientifically and socially accepted modality around the world [42,43]. In fact, 45% of the US Food and Drug Administration (FDA) approved drugs include natural products or their derivatives [44]. However, since biomedicine relies heavily on specialized technologies and laboratory testing typically housed in urban hospitals and clinics, it is often inaccessible or unaffordable to many people, especially in low-income countries and rural areas [43,45]. Low-income nations also face the challenge of lacking trained biomedical professionals due to "brain drain" as qualified physicians and nurses often immigrate to foreign countries in search of better livelihoods and professional development opportunities [46].

Regardless of these constraints to biomedical care, local populations in the Global South have held a long-standing connection with traditional medicines dating back millennia, being interwoven in the daily lives of different communities, enjoying much legitimacy, respect and cultural significance [47–49]. It has been observed that traditional medicine use in Sub-Saharan Africa increases rather than decreases even after access to biomedical care improves, which suggests that individual preferences towards traditional medicines go beyond availability and affordability [50]. In Asian countries like China, Japan, South Korea, Taiwan and India, traditional medicines have long co-existed with Western biomedicine as part of national health care systems, sharing legitimacy, popularity, and providing central care for much of their populations. Likewise, in British, French, German and Italian medicine, homeopathy, humoralism and Western biomedicine co-exist [51–53]. Even in Canada, some traditional and complementary health modalities such as acupuncture, Traditional Chinese Medicine, midwifery, chiropractic and naturopathic medicine are regulated health professions in some provinces, and some extended health benefit plans cover them.

Understandably, when COVID-19 was declared a pandemic with no end in sight, many people around the world turned to unconventional alternatives as biomedicine, the 'gold standard' for global health care, could not offer feasible solutions at the outset. This was confirmed by many surveys that the WHO conducted worldwide, prompting it to undertake several initiatives to address the global interest and demand for traditional, complementary and alternative therapies (TCAM). The COVID-19 pandemic also revealed intense public scrutiny about the efficacy and safety of prescribed COVID vaccines due to growing "infodemic" associated with online mis/disinformation, which has driven vaccine hesitancy in different communities [54,55]. As well, given COVID vaccine inequities between high and low-income countries in which Global North countries were found to hoard vaccines, thus limiting their supply and availability in Global South countries, many individuals around the globe turned to unconventional and sometimes dangerous methods to address COVID-19 with ambiguous results [55,56]. In fact, vaccine hesitancy and inequity affect disproportionately vulnerable groups such as racialized and Indigenous populations who have experienced ongoing harms and systemic discriminations within biomedical systems that have subjected them to forced and coerced sterilization, medical experimentation, neglect and abuse [57].

Realizing that many people worldwide were turning to unconventional therapies to address their experiences with COVID-19, the WHO [58] reaffirmed its support for further research and development of TCAM in both the Global North and Global South to provide guidance on the efficacy, safety and quality of traditional medicines and products. In particular, the WHO has embarked on different initiatives to promote greater integration of TCAM and biomedicine to foster an 'evidence-based integrative medicine' globally [42,43]. The WHO with the support of the government of India established the WHO Global Traditional Medicine Centre in 2022 as a knowledge hub with the mission to integrate ancient wisdom and modern science to address the health and well-being of people as well as the planet [43]. Alongside the Indian government, the WHO also held the first Global Traditional Medicine Summit in August 2023 in Gujarat, India. This summit included various stakeholders such as TCAM practitioners, users, national and international policy-makers, academics, private sector and civil society organizations to discuss best practices, and

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evidence data of TCAM's contributions to health and sustainable development [59]. In its latest draft of the Traditional Medicine Strategy (2025-2034), the WHO [42] is renewing its commitment to support different approaches and mechanisms for the integration of TCAM into national health care systems.

The global rise of integrative medicine also reflects a significant post-pandemic trend marked by a substantial increase in complex health issues with both physical and psychological implications for which biomedicine alone cannot successfully address [60,61]. In Canada, this complex health care scenario has been complicated by chronic underfunding of its public health care system along with increased health care providers' burnout, leading to a shortage of family physicians operating amidst a "health care crisis" [62]. As a last resort, many Canadian patients turn to TCAM practitioners for immediate medical attention [63].

Despite these major social and policy developments, discussions about TCAM are often polarized, being dismissed by some as "quackery", while others fervently defend it based on personal experiences of use [64–66]. Although the WHO along with many researchers advocate for a balanced integration of biomedicine and TCAM into national health care systems, evaluation of TCAM's efficacy and safety standards continue to be centred around bioscientific standards like double-blind, randomized clinical trials (RCTs) that may not always be suitable for TCAM systems like Traditional Chinese Medicine (TCM), which are more holistic, synergistic and individualized than biomedicine.

The move toward integrative medicine is especially strong in Canada, the US, United Kingdom (UK) and Australia [67–69], raising important questions about how integration occurs. Significant scholarly research demonstrates that integrating TCAM modalities and biomedicine has led to co-optation and/or devaluation of TCAM knowledges and practices given the biomedical dominance in most parts of the world [70–72]. Rather than operating in equal terms, respecting each other's unique therapeutic principles and practices, integration of TCAM modalities in mainstream health care settings has translated into subordination of TCAM treatments and providers under biomedical standards [72,73]. Further, for some TCAM practices like acupuncture which is one of the five components of TCM and has successfully undergone RCTs for conditions like back pain, infertility, and respiratory conditions, biomedical professionals have 'integrated' it into mainstream health care systems without much consideration for its internal logic that is tied to unique Chinese systemic thinking or energetic principles [74].

Complicating this asymmetrical scenario is the suggestion by many scholars that TCAM practitioners themselves actively pursue integration by accommodating with biomedical standards in what Northcott has described as "if you can't beat them, join them" [75]: 164. Thus, in efforts to demonstrate efficacy of their treatments, many TCAM practitioners are compelled to legitimize their knowledge and practices via biomedical evidence, based on RCTs since the latter constitute the 'gold standard' for evaluating the efficacy and safety of any therapeutic modality increasingly throughout the world. Relying on bioscientific evidence bases is a strong direction of many TCAM practices to not only receive recognition from other dominant health professions but also to gain acceptance from the state for the purposes of regulatory legislation, state-supported education programs and state-funded health care insurance [76,77]. Despite its efforts to support equitable TCAM integration into national health care systems, the WHO has published benchmarks for different traditional modalities such as acupuncture, Unani medicine, and Ayurveda based primarily on biomedical evidence standards to address safety and practice considerations [78]. However, during its 11th revision of the International Classification of Diseases (ICD), the WHO incorporated traditional medicine for the first time, based on the pattern system of TCM and traditional medicines in Japan and South Korea [79]. Following the official release of ICD-11 on February 11, 2022, it is now possible to collect TCM diagnostic data on a global scale, which can help promote a broader application of TCAM worldwide.

5. Questions of Appropriate TCAM Evidence

To date, limited studies exist to clarify what constitutes 'sufficient evidence' to assess complex, multifactorial, synergistic, and individualized health systems like TCM, although significant research

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addresses TCM effectiveness in transnational encounters [80–82]. As biomedical and anthropological researchers – Kirmayer & Pederson [83] maintain, evidence-based practices rely excessively on biomedical interventions that look for universalizing and standardized criteria to address population health. Such universalizing criteria usually move from the West to the rest of the world, often ignoring socially and culturally relevant or community-responsive approaches that consider local illness explanations and resources like Indigenous health modalities, which could be integrated into primary or public health systems to provide a continuum of meaningful health care.

To understand how TCAM evidence is produced and used in context against rigid boundaries like traditional vs. scientific, holistic vs. dualistic, natural vs. synthetic medicine, we need to consider the relevance of multiple epistemologies (different theories and methods) to evaluate therapeutic outcomes. This analytical approach broadens general definitions of 'evidence' by examining how bioscience and traditional knowledge can coexist within a knowledge-making culture such as TCM. This understanding helps challenge commonly held assumptions that frame the efficacy of TCM as contingent upon *either* bioscientific evidence to achieve legitimacy alongside biomedicine *or* as a unique systemic tradition premised upon distinct principles separate from biomedicine.

Recently, given pressures to accelerate appropriate responses to COVID-19, scientific communities around the world have resorted to "real world evidence" (RWE) derived from directly engaging with the lived experiences of individuals in real world settings. Key health institutions like the WHO, FDA and National Institutes of Health (NIH) have recognized RWE as legitimate forms of evidence in health-related research [84–86]. 'Real world evidence' of therapeutic efficacy and safety standards rely on data collected in real life settings including but not limited to clinical trials [85]. For example, evaluation of COVID vaccines' potential side effects on older individuals, those with chronic health conditions like cancer, or for pregnant women was substantially informed by patient testimonials and not merely by RCTs [87,88]. However, TCM's various methods to establish therapeutic efficacy and safety including detailed observations, practitioners' individualized assessments, historical cross-referencing and patients' lived experiences continue to be discounted as insufficient evidence unlike the presumed, naturally superior methods of bioscientific or controlled laboratory experiments [64,73]. TCM's real-life data cannot always be captured by statistical measurements nor is it consistently possible to standardize TCM treatment formulas that are often individualized to fit patient needs, given that the flow of *qi* energy, the multidimensional vital force that is central to TCM as a source of healing and disease is beyond the purely biological [89,90].

Thus, "universal standards" for establishing appropriate evidence bases to evaluate therapeutic outcomes must be questioned as part of decentering/decolonizing taken-for-granted Western systems of thought as the only legitimate framework for assessing the production of valid knowledge. This decentering/decolonizing process requires broadening the concepts of 'evidence' and 'science' to include diverse ways of knowing, being, and doing beyond a single biomedical paradigm. In order for a truly integrative medicine to effectively address global health issues, there must be concerted policy efforts to ensure that multidisciplinary research and balanced clinical collaboration take place in which practitioners of diverse modalities engage in respectful dialogue and knowledge exchanges without replicating ongoing hierarchies that privilege biomedical measures to assess the efficacy, safety, regulation and educational standards of any health modality.

6. Conclusions

This review article was premised on a dual argument that COVID-19 has presented challenges as well as opportunities to effective global health care by providing a deeper theoretical understanding of how certain issues such as anti-Asian violence and integrative medicine have manifested in the context of the global pandemic, and what their implications are in a post-pandemic era. While anti-Asian violence can be construed as an unintended adverse consequence and the rise of integrative medicine as an unintended positive consequence of the COVID pandemic, both issues warrant policy changes to overcome ongoing biases towards Asians as a "model minority" requiring no state support, and biomedicine as the only acceptable model to deliver global health care. The

 doi:10.20944/preprints202511.0934.v1

pervasive myth that Asians are a "model minority", immune to systemic racism has had detrimental effects in society via perpetuation of racial hierarchies that divide equity-deserving groups and undermine Asians' own health and well-being. Similarly, privileging biomedical standards to evaluate the efficacy and safety of integrative medicine replicates symbolic violence by taking for granted that biomedical dominance is inevitable and natural, thus undermining a truly integrative medicine that respects the equal contribution of, and mutual collaboration between traditional and biomedical practices to optimize global health care systems.

Supplementary Materials: The following supporting information can be downloaded at the website of this paper posted on Preprints.org.

Author Contributions: I declare that I am the sole author responsible for all aspects involved in the production of this manuscript including Conceptualization, Methodology, Software Use, Data Analysis, Writing - Original draft preparation, Reviewing and Editing.

Funding: This study received no external funding but was supported by an internal faculty research grant from King's University College at Western University in the 2024-2025 academic year.

Informed Consent Statement: Informed consent was not required in this study since it did not involve any human research participants. This study was primarily based on textual data.

Data Availability Statement: The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest: The author declares no conflicts of interest

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