

Original Research

## The Symptomatic Expression in Chinese Patients with Suspected COVID-19 Omicron Variant Infection: A Clinical Case Registry Study

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### Abstract

Little systematic research has been conducted into the symptomatic expression of COVID-19 infections in patients. It is known that symptomatic expression varies between patients, but the nature and extent of this variability is poorly understood. This paper elaborates on the symptoms reported by Chinese patients infected with COVID-19 during the Omicron wave, and compares this with available data from other countries. This was an observational clinical case registry study of Chinese patients with suspected Omicron variant COVID-19 infection. Symptoms were prospectively collected via a 171-item questionnaire and entered into the Clificol COVID-19 Clinical Case Registry. Two types of symptoms were distinguished: A) common clinical symptoms as identified by a search of available/published data, and B) homeopathic symptoms, used for the selection of the most suitable homeopathic medicine.



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Data were mainly analysed descriptively. Additionally, we compared the prevalence of the reported symptoms with available symptom data from the UK and France. Twenty one Chinese practitioners collected questionnaires on 388 cases that received a first homeopathic prescription between 5 December 2021 and 8 April 2022. With respect to A), the most frequently reported clinical symptoms were respectively cough (71%), fever (65%), extreme tiredness (58%), headache (51%), sore throat (46%), runny nose (34%), unusual muscle pains (31%), hoarseness (21%), eye soreness (8%) and brain fog (6%). With respect to B), homeopathic symptoms related to cough and fever were particularly prevalent. This study identified the reported symptoms of Chinese COVID-19 patients with suspected Omicron variant infection. A more detailed understanding of the clinical presentation of COVID-19 variants in different countries is important for the selection of test-triggering symptoms.

### **Keywords**

Covid-19; SARS-COV-2; Omicron variant; clinical case registry; homeopathy

## **1. Introduction**

The first COVID-19 cases in China were reported in December 2019. Since then, there were multiple infection waves around the world, the latest being attributable largely to the Omicron variant. The official death toll attributed to COVID-19 is over 6 million people (<https://www.worldometers.info/coronavirus/>), but the true toll is likely to be significantly higher [1]. Despite the success of vaccination programs and slowly rising herd immunity, China struggled to contain case numbers infected with the milder, but highly contagious, Omicron variant.

Whilst anecdotal data abounds, little systematic research has been conducted on the symptoms reported by patients infected with COVID-19. For the Omicron variant, the most reliable identifiable data seems to come from hundreds of thousands of UK citizens reporting their symptoms on their smartphone as part of the ZOE COVID Study (<https://joinzoe.com/learn/omicron-symptoms>), the results of which were recently published in *The Lancet* [2]. The lack of information on the nature of Omicron variant symptoms is compounded by the -usually- milder nature of infections with the Omicron variant, leading to fewer interactions between patients and their healthcare providers.

By December 2021, the Omicron variant was involved in almost all of the Chinese patients testing positive for COVID-19. Despite stringent public health measures, including contact tracing and quarantine not only of close contacts but also close contacts of close contacts, the outbreak of BA.2.2 was not controlled and this strain was responsible for the large epidemic that occurred. Virus sequencing has been done throughout the epidemic, and the last local BA.1 cases and Delta cases were detected in mid-January and early February, respectively, with one sporadic local Delta detection in late March [3].

Whilst information is available on symptoms reported by Chinese patients during the first COVID-19 wave [4-6], little is known to date on symptoms reported by Chinese patients suspected of infection with the Omicron variant.

In order to improve the management of the pandemic, there is a need to better understand variability in the clinical manifestations of COVID-19 infections. Such knowledge is also important

for the identification of suitable 'test-triggering' symptoms [2]. Whilst there is knowledge on patient factors (such as co-morbidity) that influence the likelihood of developing severe symptoms, little is known about virus-strain related symptom variability, and even less about geography related symptom variability. At the time of writing, we were only able to identify two studies that reported in detail on the prevalence of clinical symptoms in Omicron cases, one from the UK [2], and one from France [7]. No such studies from China were identified, leading us to conclude that there is a knowledge gap in this regard.

Apart from this, we were interested in 'homeopathic' symptoms reported in Chinese patients infected with the Omicron variant. Homeopathic symptoms are all abnormal sensations experienced by a person as a whole, or in a part of the body. While clinical symptoms are pathophysiologically related to the functioning of the organ system(s) involved in the disease, this is not required for homeopathic symptoms [8]. In homeopathic practice, including in the treatment of COVID-19 patients [9], both clinical and homeopathic symptoms are used in the selection process of the appropriate homeopathic medicine.

The primary aim of this study was to explore in detail reported clinical symptoms of Chinese patients infected by the Omicron variant. In addition, we compared our findings with the available data from other countries and we looked at reported homeopathic symptoms. The preliminary results of this study were posted on a preprint server [10].

## **2. Materials and Methods**

Prospectively collected, questionnaire based, COVID-19 clinical case data were analysed. The recruitment and treatment of patients was organised by the Living Homeopathy Clinic in Hong Kong, which offers treatment to a large number of patients in Mainland China as well as to the Hong Kong and Macau Special Administrative Region populations. A team of 21 practitioners was involved in the co-ordination of the recruitment, questionnaire administration and treatment of patients. For children, the questionnaires were completed with the parents. Most recruitment of patients took place online using videoconferencing, and some via voice call or whilst attending the clinic in person. Acute COVID-19 cases from China, who had tested positively for COVID-19 that received a first homeopathic prescription between 5 December 2021 and 8 April 2022, were eligible. Eligible patients needed to have at least one of the following diagnostic criteria as described in the 7th edition of the diagnosis and treatment protocol in China [11]: 1) Reverse Transcription Polymerase Chain Reaction (RT-PCR) positive for 2019-novel Coronavirus (2019-nCoV); 2) Serology test positive for IgM/IgG (immunoglobulin M/immunoglobulin G) specific for COVID-19. On the 25th of February 2022, the Hong Kong government recognised the rapid antigen test as a valid test for COVID-19 (<https://www.info.gov.hk/gia/general/202202/25/P2022022500816.htm>). From that time onwards, antigen positive cases were also considered as suspected Omicron cases in this study. Genomic testing of the COVID-19 variant was not conducted for the following reasons: A) Our clinical case registry project centred around recording routine clinical practice, and this did not include genomic sequencing; B) Determining the COVID-19 variant was not the primary purpose of our study; C) knowing the variant had no implications in terms of the homeopathic treatment, which was focused on treating the symptomatic expression in individual patients, and D) it was not practically feasible in the context of a very rapidly evolving COVID-19 wave.

A 171-item paper-based questionnaire for collecting Omicron-wave related symptoms was developed by our team. It was based on the questionnaire utilized in previous flu seasons, and then modified in line with the information available on COVID-19, including any reports on Omicron symptoms available. With the aim to make the questionnaire as self-explanatory as possible, the wordings of some of the questions were further fine-tuned if there were reports that patients asked for clarification. Also, there was an open field after the sections, in which patients could indicate any prominent features. Based on this feedback, some items were added to the nasal symptoms and cough sections, making the questionnaire better tailored to this particular outbreak. The questionnaire contained a mandatory assessment of a number of clinical (diagnostic) symptoms such as fever, chills, weakness, cough, headache, sore throat, etc, as well as further homeopathic symptoms such as thirst, dryness of mouth, poor appetite etc., as well as factors that modify (i.e. ameliorate or aggravate) symptoms, e.g. warm drinks, open air, motion, etc (called 'modalities'). Homeopathic symptoms and their modalities were categorized in so-called 'homeopathic repertory' rubrics using a special software program (ZeusSoft RadarOpus, version 3.0.16). Rubrics of homeopathic symptoms and their modalities are referred to in this paper as 'homeopathic symptom rubrics'.

An overview of the symptom assessment is given in Table 1.

**Table 1** Overview of the symptom questionnaire.

<b>System/organs concerned</b>	<b>Common clinical* symptoms</b>	<b>Homeopathic* symptoms</b>	<b>comment</b>
<i>General/mental</i>	Fever	Fever, alternating with chills	
	Extreme tiredness/fatigue	Worse after physical exertion	
	Brain fog	Worse from motion	
	(memory/concentration problems)		Mental restlessness Pain aggravated by cough Ameliorated from open air
<i>Head</i>	Headache		Headache worse during fever Headache at temples
<i>Eyes, nose, mouth and throat</i>	Eye soreness		
	Runny nose		
	Loss of smell		
	Loss of taste		
	Hoarse voice	Dryness of mouth	
<i>Respiratory</i>	Sore throat		
	Cough	Dry cough	
<i>Gastrointestinal</i>	Chest constriction		
			Appetite, poor/wanting Thirst for large quantities
<i>Musculoskeletal</i>	Unusual muscle pains	Restlessness of limbs	

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Bone pain, worse during fever

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\*'Clinical' symptoms are clinically and/or pathophysiologically related to the COVID-19 diagnosis. 'Homeopathic' symptoms are experienced by some patients, but not necessarily pathophysiologically related to the clinical diagnosis. Both types of symptoms can be used in the selection process of an individualized Homeopathic Medicinal Product.

Demographic characteristics such as age and sex were also recorded, as well as -if available- the following COVID specific baseline data: Date when symptoms started; results of any PCR, antibody tests and/or antigen tests, CT (computed tomography) status, need for oxygen and/or ICU care if hospitalized.

The full questionnaire is available as Supplementary File 1.

After screening of patients by a study team member, the questionnaire was administered to eligible, verbally consenting, patients.

Completed questionnaires were converted into clinical symptoms and in addition, the symptoms that could be used in the homeopathic remedy selection process, were converted into repertory rubrics according to a standardized protocol. Members of the Hong Kong team entered the data into the Clificol database, which is a cloud-based, General Data Protection Regulation (GDPR) and Health Insurance Portability and Accountability Act (HIPAA) compliant international Clinical Case Registry (<https://www.clificol.net/>).

All data were fully anonymised in compliance with GDPR/HIPAA standards during uploading to the online platform.

The analysis team would download the data periodically from the platform as excel sheets. Any errors detected were resolved via discussion in the database team. Data were stored on password-protected databases, and accessible only by members of the analysis team.

The data analysis was primarily descriptive. The prevalence of clinical symptoms between the three countries was described and compared via the calculation of the percentages and their 95% confidence intervals. Because the three datasets are not fully comparable in all regards we refrained from conducting formal statistical tests, on the grounds that this would give a spurious sense of precision. Analyses were conducted in SPSS (version 27) and Microsoft Excel (version 16.56).

Because this was a routine practice-based case-registry project, and therefore not a research project with the aim to answer any medical research question, the need for ethics approval was waived by the Bern Kanton Ethics Committee, Murtenstrasse 31, 3010 Bern, Switzerland (BASEC-Nr: Req-2022-01243).

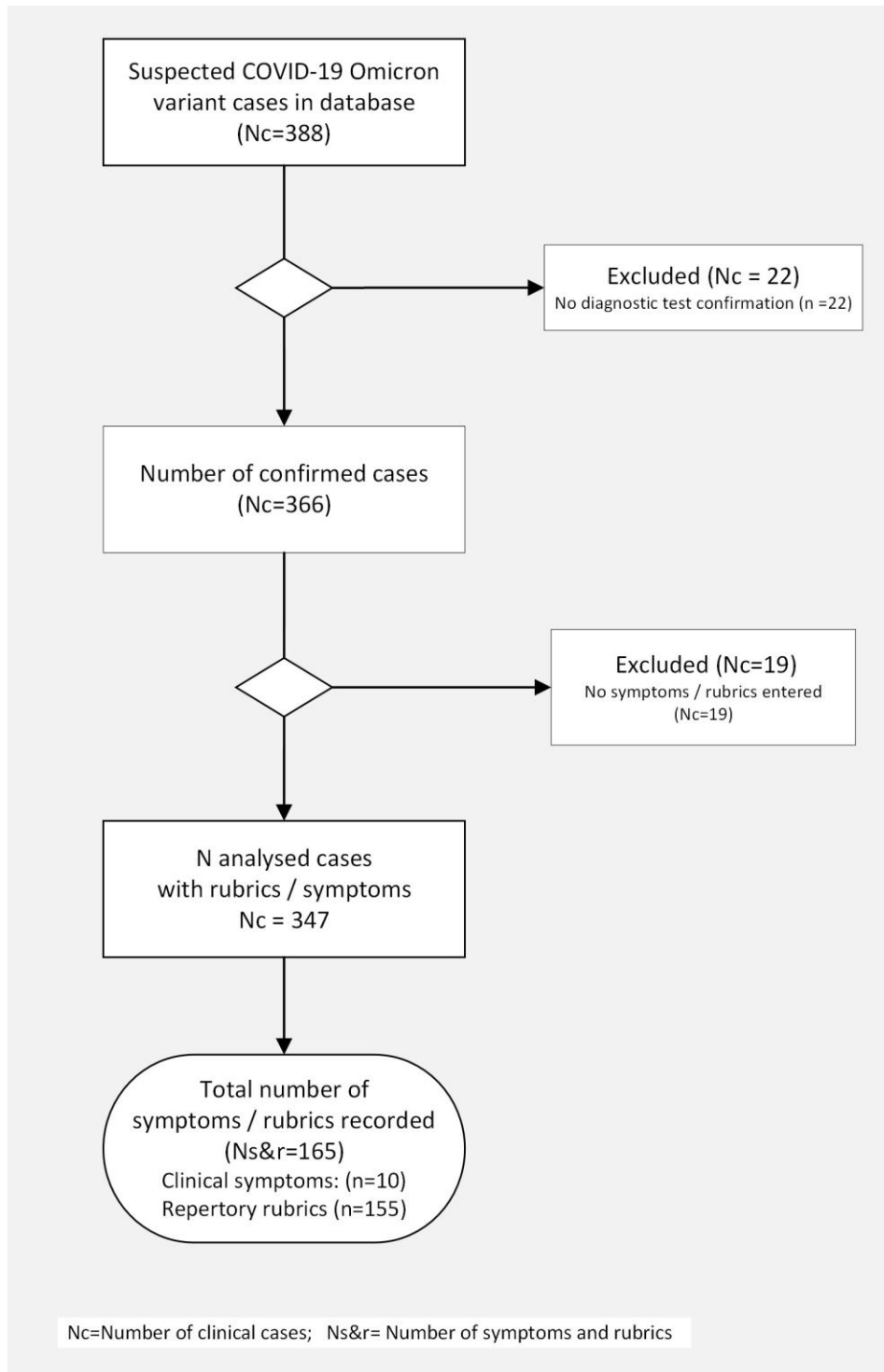
Informed verbal consent was obtained from all patients and/or their legal guardians whose data was entered into the database.

The study was carried out in accordance with relevant guidelines and regulations (e.g. the Declaration of Helsinki).

### 3. Results

#### 3.1 Study Base

The patient recruitment and symptom and rubric selection process are outlined in Figure 1.



**Figure 1** Patient and symptom selection flowchart.

In 347 of the 366 eligible cases with completed questionnaires, symptoms and/or rubrics were recorded. As expected, many patients had the same clinical symptoms, and some patients had the

same homeopathic symptoms (converted into rubrics). Collectively, in total 165 unique symptoms and/or rubrics were reported.

Some demographic and clinical characteristics of the 347 cases with symptoms and/or rubrics, are given in Table 2.

**Table 2** Main Demographic and clinical characteristics of the patients.

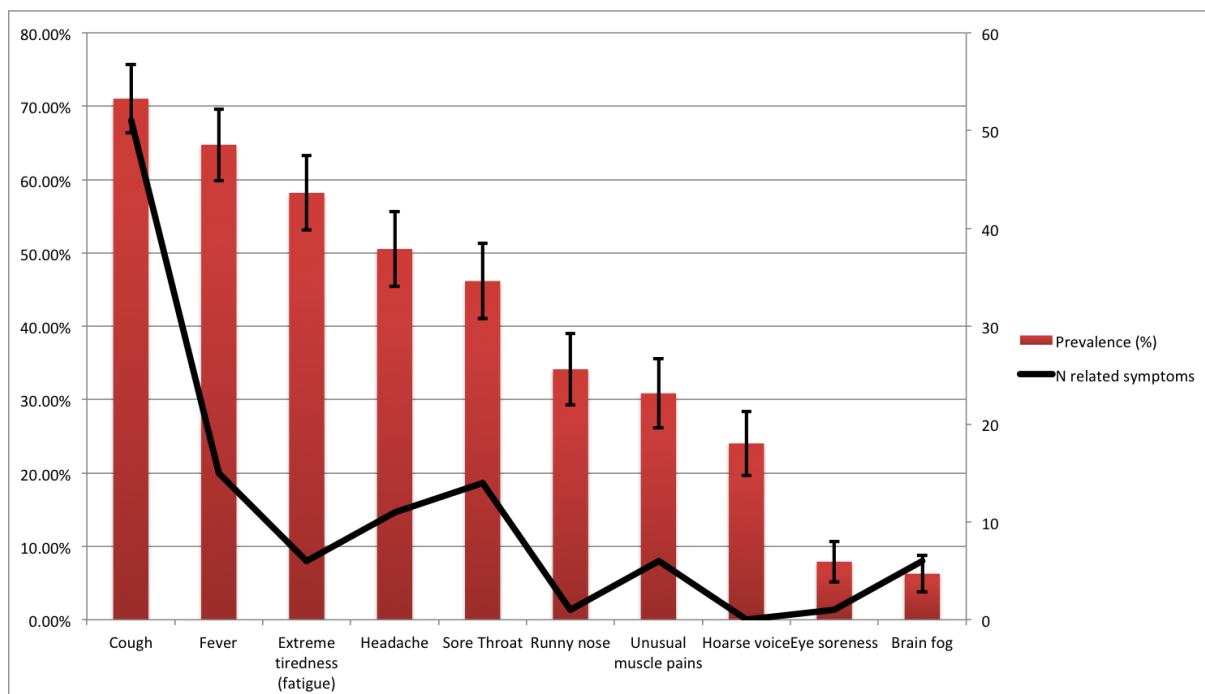
Characteristics	(N = 347)
Sex; n (%)	
Female	227 (65%)
Male	120 (35%)
Age [years] (mean [min, max])	
0-14 n (percentage of column total)*	49 (14%)
15-29	27 (8%)
30-44	118 (34%)
45-59	88 (25%)
60-74	48 (13%)
≥75	17 (5%)
Duration of symptoms; n (%)	
<24 hours	221 (64%)
1 day	45 (13%)
2 days	29(8%)
3 days	21 (6%)
4-6 days	22 (6%)
7-9 days	4 (11%)
10-14 days	4 (11%)
15-30 days	1 (0%)
Accuracy COVID-19 diagnosis; n (%)	
PCR/Ab/Ag confirmed	347 (100%)
Severity of COVID-19; n (%)	
Mild	339 (98%)
Moderate	8 (2%%)
Comorbidity <sup>¶</sup>	
Hypertension	27 (8%)
Respiratory diseases	20 (6%)
Auto-immune diseases	17 (5%)
Cardiovascular diseases	12 (3%)
Diabetes	12 (3%)
Cancer and malignancies	12 (3%)
Obesity	5 (1%)
Immunosuppressive treatment	2 (0%)

\*Percentages were rounded to the nearest integer

<sup>¶</sup>Patients could have more than one Comorbidity

### 3.2 Analysis of Symptoms

In total, 10 clinical symptoms and 155 distinct homeopathic symptom rubrics were reported. The prevalence of the 10 clinical symptoms is depicted in Figure 2 (red bars).



**Figure 2** Prevalence (with 95% CIs) of the clinical symptoms (bars/left axis) and the reported number of related homeopathic symptoms (line/right axis).

The prevalence of the 10 assessed clinical symptoms ranged from 5% for 'brain fog' to 70% for Cough. Cough, fever, tiredness, headache and sore throat were the five most commonly reported clinical symptoms.

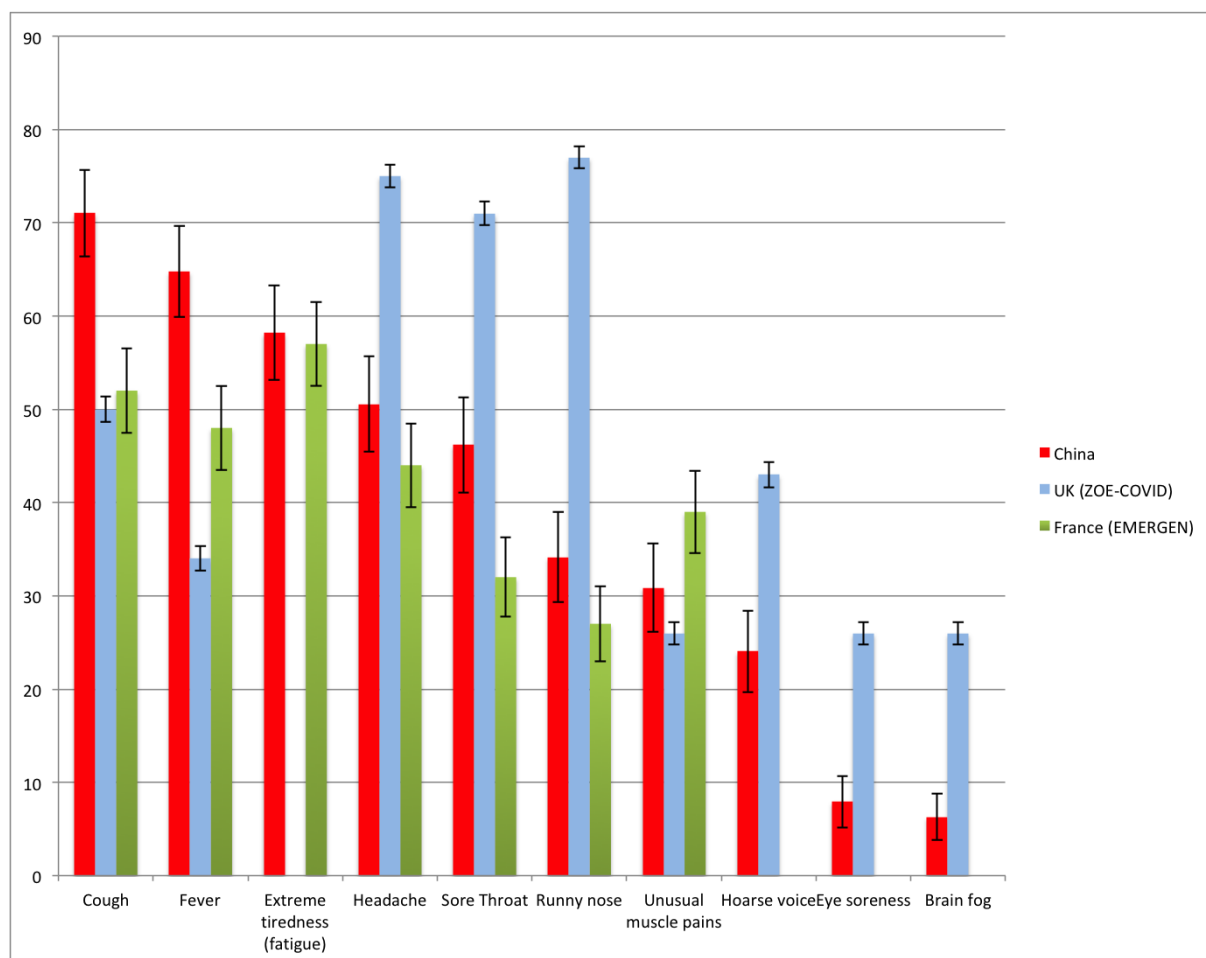
A detailed overview of the most common homeopathic symptoms (prevalence >10%) is given in Supplementary File 2. We also looked if there was a relation between the reported homeopathic symptoms and the clinical symptoms. The line represents the number of homeopathic symptoms that were related to the clinical symptoms and the number of times that this occurred is quantified in the right vertical axis. As depicted by Figure 2, a significant amount of the homeopathic symptoms were related to the clinical symptoms. This applied particularly to accompanying symptoms and/or modifying factors of the clinical symptoms cough, fever, and sore throat; some examples are 'cough, ameliorated by warm drinks', 'thirst, worse during fever' and 'throat pain worse on empty swallowing'. In total 102 rubrics (65% of the total number of rubrics) were related to one or more of the 10 clinical symptoms. This illustrates that the majority of the homeopathic rubrics are a more specific, 'granular' expression of several of the clinical symptoms. Differently put, the homeopathic symptoms provide a more detailed 'mapping' of the clinical expression of COVID-19 in individual patients.



### 3.3 Comparison with Data from UK and France

The main publication from the UK concerns the ZOE COVID study, which compares clinical symptoms and clinical outcomes reported on the ZOE app in two matched groups (n = 4990 each) during periods of the Omicron and Delta variant dominance [2]. The main publication from France (n = 468) was conducted by the EMERGEN consortium [7]. In this study they used a standardized clinical symptom questionnaire and genomic sequencing to confirm the Omicron variant diagnosis.

The prevalence of the 10 most common clinical symptoms (in the Chinese data) is compared between the countries in Figure 3.



**Figure 3** Between country comparison of clinical symptom prevalence (% with 95% CIs). Missing bars are due to no data being available.

Figure 3 suggests that there are commonalities as well as differences. Cough and fever were more commonly reported in Chinese cases, with a prevalence of 71% (95% confidence interval 66.4 to 75.6) and 65% (95% confidence interval 60.1 to 69.9) respectively. Overall, for the most common clinical symptoms, the Chinese data appear to be more similar to the French data than to the UK data. On the other hand, the least common clinical symptoms are absent or not reported in the French data. Headache, sore throat, and runny nose appeared to be more common in UK cases.

The available data supports the observation that loss of taste and smell is less common in suspected Omicron cases [12]. For instance, the French study reported a respective prevalence of

9% and 8%. And the UK study reported that loss of smell was less common (17%) in Omicron patients compared to the reported prevalence in the Delta wave (53%). Also in our dataset, loss of taste or smell was also less common (and were therefore not listed in Figure 3), with a prevalence of 5% and 4% respectively.

The symptom odynophagia (pain on swallowing), has been reported to be more common in the Omicron variant as compared to patients infected with other variants [13]. Our findings are in line with this; odynophagia was reported by 13% of the patients. Interestingly, 9% of patients reported their throat pain to be ameliorated by swallowing liquids. This illustrates the variability in the symptomatic expression of COVID-19 in individual patients.

#### **4. Discussion**

This was the first detailed study on the symptomatic expression of suspected Omicron cases in the Chinese population. The most commonly reported clinical symptoms were respectively cough, fever, fatigue, headache and sore throat. The most commonly reported homeopathic symptoms that were related to the clinical symptoms were accompanying symptoms and/or modifying factors of cough, fever and throat pain (As an example, the cough related homeopathic symptoms are provided in Supplementary File 3).

To our knowledge, this is the first study that provides further insight in the symptoms of suspected Omicron cases in the Chinese population. The study population was relatively homogeneous, and the symptoms were obtained and identified in a standardized way, through the use of a questionnaire.

We decided to include 'brain-fog' as a clinical symptom in the questionnaire, even though it is a relatively subjective symptom. This was done because it is commonly reported in connection with COVID-19, and because further research suggests that it is a distinct and recognizable symptom cluster which is primarily characterized by fatigue, dizziness, myalgia, word-finding difficulties, and memory impairment [14].

Many of the more detailed homeopathic symptoms reported by patients clustered around some of the clinical symptoms (for example, see Supplementary File 3). A unique feature of this study is that due to the high number of symptoms elicited in the questionnaire, it provides a more detailed mapping of the symptoms that were experienced by infected patients.

A limitation, inherent in any case registry study, is that the analyses were primarily descriptive. Also, the sample size was fairly small ( $N = 366$ ), but still in a similar league compared to the number of cases in the EMERGEN Consortium study by Maisa et al [7] ( $N = 468$ ) as referred to above. In addition, the proportion of females in our sample was higher than that of males. Whilst this is representative of patients that tend to seek complementary and integrative medicine treatments, it makes the sample less representative for the Chinese population at large. Therefore, larger and broader samples would be useful to further substantiate our findings.

In this study, we compared our original data with publications reporting the French and British data. We did not have access to the raw/original data of the latter, which limited direct comparisons of the data.

Even though the data collected also included information on the homeopathic medicine(s) prescribed and outcomes, these results are not reported in this paper. The primary purpose of this

study was to further explore the diagnostic role of the clinical symptoms, and to report on related homeopathic symptoms.

With regard to the role of the clinical symptoms, our study succeeded in providing information on the most important test triggering symptoms in Chinese patients. Determining how many of these symptoms would need to be present to trigger testing, was outside the scope of our study, because this would depend on the required diagnostic sensitivity and specificity as shaped by clinical need and the national health policy. With regard to the homeopathic symptoms we only report on the symptoms experienced prior to receiving homeopathic treatment and their possible relation to the clinical symptoms. The course of, and changes in, symptoms following treatment, was out of the scope of this article, Therefore, no statements on the prognostic value of clinical and homeopathic symptoms as predictors for the prescription of particular homeopathic medicines are made.

A limitation of our study is that we cannot be sure that all included patients were infected with the omicron variant because patients were not specifically tested for this via genomic sequencing. During the inclusion period, the Omicron variant was dominant in the Chinese/Hong Kong population [3]. A detailed study that included whole genome viral sequencing by Cheng et al [15], indicated that the fifth COVID-19 wave started in Hong Kong in December 2021, peaked in January and February 2022, and then faded out in late April 2022. This study found that 74% of the patients were infected by omicron variant, and in particular the rapidly spreading BA.2 sub-lineage. The french study by Maisa et al [7] conducted laboratory tests that targeted spike protein substitutions indicative of Omicron infection. It found that in early December 2021 the Delta variant was still dominant but by mid january 2022 the Omicron variant had become completely dominant. In our study we started recruiting patients in early December 2021, so under the assumption that the transition from Delta to Omicron dominance was roughly similar in Hong Kong, our study would have likely included some patients with the Delta variant during the early recruitment stage.

It should also be pointed out that the distinction between 'clinical' and 'homeopathic' symptoms is neither strict, nor absolute. For instance, odynophagia, lack of taste and lack of smell are considered to be both 'clinical' and 'homeopathic' symptoms. As mentioned, clinical symptoms are characterized by a pathophysiological connection between the symptoms and the disease. For homeopathic symptoms, a pathophysiological connection is possible, but not a requirement. A further difference is that clinical symptoms are primarily used as a *diagnostic* indicator for the disease under consideration, whilst homeopathic symptoms are primarily used as *prognostic* factors to indicate the specific homeopathic medicinal product most likely to be effective in that particular patient [16]. Despite observing an association between reported clinical symptoms and homeopathic symptoms (Figure 2), it should be pointed out that for a significant proportion of homeopathic symptoms (36%), there was no association with the clinical symptoms. This is expected, and in line with the homeopathic principle of 'treating the patient', rather than 'treating the disease'.

Since we could not be sure that the reported symptoms are representative of Omicron patients in other geographical regions, we decided to have a closer look at the available literature in this regard. Whilst the overall spectrum of clinical symptoms was similar between the three countries we compared, there were variations in the prevalence of specific symptoms. This was more explicit in the comparisons with the UK data than with the French data. Part of this difference could possibly be explained by the different methods of data collection. The UK study made use of an App on

smartphones, whilst the Chinese and French data were based on the administration of a questionnaire by symptomatic patients. It is conceivable that the ease and accessibility of data entry via a smartphone app could lower the threshold for symptom entry, leading to the reporting of more and milder symptoms. The available data provide some support for this, as the average prevalence of clinical symptoms was distinctly higher in the UK dataset, as compared to the French and Chinese data. However, other factors could explain the observed differences as well. For instance, the distinctly higher prevalence of fever in the Chinese population in comparison with the UK population could be due to the relative predominance in China of the Omicron BA.2 sub-type [3, 15], which has been reported to be associated with more severe symptoms as compared to BA.1 sub-type [17]. Therefore, further studies are needed to properly assess the influence of the data collection method on symptom prevalence.

Our findings confirm reports from other countries that the occurrence of symptoms of chemosensory dysfunction is less common with the Omicron variant as compared to previous variants. This is of importance for better understanding the mechanisms behind these symptoms, which are still not fully understood [18].

Apart from the UK and French studies referred to in detail, we identified five more publications of interest.

Lippi et al [19] conducted a Google trends search in Italy, comparing popular search terms during a period with Omicron variant dominance with popular search terms during a period with Alpha variant dominance. They reported a relative predominance of sneezing, sore throat, fever, chills, headache and tiredness during the period of Omicron predominance. This suggests that Google trends can provide early information on changes in experienced symptoms.

In a survey conducted in the Faroe Islands during the omicron wave [20], the most common clinical symptoms were very similar to the ones in our study; only one of the 10 most common symptoms (chills) was not included in the 10 most common symptoms reported in our study. Something almost identical was observed in a study conducted in Iran [21]; 'sweating' was the only one of the 10 most common symptoms not identical to those in our study. In a study conducted by homeopaths during the omicron wave in India [22], 7 of the 10 most common clinical symptoms were the same as in our study. The only minor difference was that the Indian study reported more nasal symptoms.

Another study assessed the symptoms of some of the first confirmed Omicron variant cases in South Korea [23]. Sore throat, fever, cough, headache and runny nose were the most commonly reported symptoms, with a prevalence ranging from 10-25%, which is lower than the reported prevalence of the same symptoms in most other countries.

Overall, our findings suggest that there is a fairly high amount of geographical stability in terms of the types of clinical symptoms reported, but that at the same time there is some between country variability in the prevalence of these symptoms.

A more detailed understanding of the clinical presentation of COVID-19 variants is important for the selection of test-triggering symptoms. The clinical presentation in response to different variants has shifted significantly and our findings clearly confirm this. A comparison with 'first wave' data from China collected by our team reveals distinct differences with the first (alfa) wave; during the omicron wave, patients reported e.g. more symptoms of the larynx, trachea and throat, that were aggravated by coughing (Supplementary File 4). Again, genomic sequencing is essential for definitive confirmation of the variant concerned, and the absence of this is a limitation of our study.

Our study provided the first detailed mapping of symptoms reported by Chinese COVID-19 patients suspected to be infected with the Omicron variant. Even though the overall clinical symptom expression was similar to those reported for other countries, cough and fever related symptoms appeared to be particularly prevalent in the Chinese population.

## **5. Conclusions**

This study identified the reported symptoms of Chinese COVID-19 patients from the Hong Kong region with suspected omicron variant infection. A more detailed understanding of the clinical presentation of COVID-19 variants in different countries is important for the selection of test-triggering symptoms.

## **Abbreviations**

RT-PCR	Reverse Transcription Polymerase Chain Reaction
GDPR	General Data Protection Regulation
HIPAA	Health Insurance Portability and Accountability Act

## **Author Contributions**

Alexander T and Yvonne F were involved in the planning, conduct, analysis, and writing of the article. Robbert van H and Aaron T were involved in the planning and interpretation of the analyses and writing of the article. All authors reviewed, and agree to the contents of, the manuscript.

## **Competing Interests**

The authors declare that they have no competing interests

## **Data Availability Statement**

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

## **Additional Materials**

The following additional materials are uploaded at the page of this paper.

1. Supplementary File 1: Full version of the questionnaire.
2. Supplementary File 2: Homeopathic symptoms with a prevalence of more than 10%.
3. Supplementary File 3: Homeopathic symptoms related to the clinical symptom cough.
4. Supplementary File 4: Prevalence of the most commonly reported symptoms during the omicron wave as compared to the alfa wave. Bars are 95% confidence intervals.

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