CHINESE COMMUNITY HEALTH PROFILE 2023

A BOLDER HEALTHIER BIRMINGHAM

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Community Evidence Summaries

As part of the Public Health Division's work to improve the understanding of the diverse communities of Birmingham, we are developing a series of evidence summaries to improve awareness of these communities and their needs.

There are common objectives for each of the evidence summaries, which are:

- To identify and summarise the physical health, mental health, lifestyle behaviour, and wider determinants of health-related issues affecting the specific community nationally and locally.
- To identify and summarise gaps in knowledge regarding the physical health, mental health, lifestyle, behavioural and wider determinants of health-related issues that may be affecting the specific community both nationally and locally.
- To collate and present this information under the ten key priority areas identified in the Health and Wellbeing Strategy for Birmingham 2022 to 2030.
- To engage with the local communities on the evidence found and any gaps.
- To promote the use of these summaries for Local Authority and wider system use for community and service development.
- To empower communities, by providing them with a summary of health inequalities, which can be used to advocate for change across local systems to improve outcomes.

Executive Summary

The Chinese Community Health Profile identifies and summarises the national and local evidence concerning the health, lifestyle behaviours and wider determinants of health that affect the Chinese community. Although the focus of this report was health inequalities among the Chinese community in Birmingham, the limited available information on health inequalities has resulted in data being used from the UK and internationally where available.

This report covers health topics throughout the life course from maternity to ageing and dying well and includes chronic health conditions such as diabetes and cardiovascular disease. The report also covers protect and detect topics such as screening and vaccinations, as well as other themes such as knowledge and understanding of health issues affecting the Chinese community.

There has been evidence of health inequalities between different community groups across the UK for some time, some of which have been exacerbated by the Coronavirus pandemic. This Community Health Profile aims to unpack some of these issues, with a focus on the Chinese community.

Much of the data for examining health outcomes in this profile has been taken from open-source research and health records. It is worth noting that the sample sizes, coverage, and quality for some studies are imperfect. The picture is complex not only between different community groups but also across different conditions. Understanding and knowledge is also limited by a lack of good quality data. This health profile aims to highlight the available health data and the current gaps in our knowledge and understanding.

Chinese Community in the UK

Some of the first Chinese migrants to Britain were documented during the 17th century when Britain began to trade with China. Although migration from China has been ongoing since then, by the end of the Second World War there were still less than five thousand Chinese people living in Britain.(1) A large increase in Britain's Chinese population was noted in the 1951 census, which then stood at 12,523. The spike in population was closely tied to the increased number of refugees following the end of the Chinese Civil War in 1949.(2) The British Chinese community has continued to grow since then and in 2021 there were 445,617 people in England and Wales who identified as Chinese.(3)

At the local authority level, Birmingham has the second largest Chinese diaspora of all local authorities in England and Wales, just behind Manchester. In 2021, there were 12,487 Chinese individuals living in Birmingham, making up 1.1% of the city's total population.(4). Within Birmingham, the community is primarily concentrated in the inner-city wards and wards south-west of the centre, with the population having the greatest concentration in Digbeth (13.1%), Central (7.4%), Selly Oak (6.0%) and Edgbaston South & University (5.9%) Middle Super Output Areas.(4)

The key health inequalities identified within this Chinese Community Health Profile are:

Getting the Best Start in Life

- The national 'oral health survey of 5-year-old children report' from 2017 identified that Chinese children aged 5 experienced higher levels of dental decay (42%) compared with the England average (23%).(5)
- During the academic year 2018 to 2019, Chinese preschool girls in Birmingham had the lowest percentage of pupils meeting expected development levels (70%) compared with all other ethnic groups (74%).(6)

Mental Wellness and Balance

- Chinese men in 2019 scored the lowest across all ethnic groups in England on the Warwick-Edinburgh Mental Wellbeing Scale (50.8), also much lower than Chinese women (52.3).(7)
- The Chinese community in contact with inpatient acute mental health services in the UK had high rates of compulsory admission (67%) compared with the general population (47%).(8)

Active at Every Age and Ability

- 51% of the Chinese population in the West Midlands from 2020 to 2021 were physically active, compared with 60% of the White British population.(9)

Living, Working and Learning Well

- In 2019, 17% of the Chinese population in England lived in the top 10% most deprived neighbourhoods by 'living environment' (10% England average).(10)
- According to the GP Patient Survey, only 49% of Chinese patients in England "definitely" had trust in their healthcare professional at their last GP appointment compared with 62% of people in the general population.(11)

Protect and Detect

- A 2014 study on screening uptake in the North West of England (N=214) found that just over half (n=54) of the eligible Chinese population had attended cervical cancer screening (79% average across ethnic groups).(12)
- Approximately 9% of Chinese adults were identified as having Hepatitis B in a 2012 study in the North East of England, higher than UK average prevalence of between 0.1% to 0.5%.(13)

Ageing and Dying Well

- In one study using the De Jong Gierveld loneliness scale, Chinese adults scored highest on total loneliness (2.8) when compared with the overall population (2.5).(14)

Contributing to a Green and Sustainable Future

- Bordesley & Highgate ward in Birmingham contained the highest proportion of Chinese residents in 2021 (6.3%), this ward was classified in 2014 as an area of the city with the least environmental justice (0.40) for citizens. These are areas which have poor access to green space, are urban heat islands (UHIs), have higher flood risk, and higher deprivation levels.(15)
- Approximately 27% of the Chinese community live in the 15 most polluted MSOAs in Birmingham, according to MHCLG data from 2020, compared with 5.4% of the White British population.(16)

Methodology

An exploratory search was undertaken by the Public Health Communities Team using a range of databases such as National Data Sources, NOMIS (Office for National Statistics), and PubMed to identify information on Chinese communities for this profile. Keyword search terms and subject headings relevant to the themes were identified. All references used within this profile are outlined in the references section.

As an initial exploratory search, the following avenues were examined:

a. National data sources

Census Data:

Data has been extracted by ethnicity from the Office for National Statistics (ONS) for the 2021 census; data from the 2011 census has only been used as a comparison and/or where 2021 data were not available. Any conclusions based on historical data or information should be considered with caution. The relevant ethnicity category in the 2021 census which has been included in analysis within this report is the 'Asian, Asian British or Asian Welsh: Chinese'. In This report, people of 'White: English, Welsh, Scottish, Northern Irish or British' ethnicity are referred to as White British.

Government and Health System Data Sources:

Routinely collected government data has been extracted where relevant information on Chinese ethnicity was available, including education data from the Department for Education, crime data from the Home Office and housing data from the Ministry of Housing, Communities and Local Government (MHCLG). Some data on the Chinese population for these routine sources were masked, due to small numbers.

National voluntary and community sector reports:

These have been identified through Google Scholar and national websites, specifically where relevant Chinese community-level data was available, such as:

- The King's Fund
- British Heart Foundation
- Sport England
- Versus Arthritis
- Diabetes UK
- British Lung Foundation
- Cancer Research UK
- World Health Organisation

b. Academic Database Search

Systematic literature searches were performed in Medline, Embase, PsychInfo and Web of Science on December 13, 2022. All searches contained terms covering relevant UK geography terms and terms to describe the Chinese community. Searches were limited to studies published in the English language, published from 2012 onwards. Full search strings can be found in **Appendix 1**.

c. Grey Literature

Where information sources had not been identified through a or b, further searching through Google and Google Scholar using topic specific search terms were carried out. Resources that were relevant to the UK were included, i.e., data and information stemming from local or national-level reports and/or surveys.

d. Data consolidation and analysis

Findings from international and national systematic reviews and large-scale epidemiological and qualitative research studies were also considered for inclusion. International research findings were included if they were deemed to be comparable or relevant to the national population.

In addition, some "snowballing", a technique where additional relevant research is identified from the reference list and citations of the initial search or published article was also applied. Additional papers were identified from reference lists using this approach, where these additional resources enhanced the knowledge base. Generally, searches were limited to literature from the last 10 years; information from a further 5 to 10 years prior was included if the results were too limited.

Results retrieved from the initial searches were reviewed by the author against the search strategy (**Appendix 1**). The articles utilised in this document were then analysed, identified, and cross referenced with other themes throughout the profile. All resources utilised have also been reviewed against the inclusion and exclusion criteria (**Appendix 2**).

e. Caveats and Limitations

It is important to note that the Chinese Community Health Profile is limited by the data sources available. In some instances, data on the Chinese community living in Birmingham is absent or only focuses on a sub-section of the community (e.g., international students or first-generation migrants). In addition, data from the 2021 Census included in the report reflects the data that was available from the dataset at that time and may have since been updated by the ONS.

In section 2.5.3 and 2.8, in the absence of much data on deprivation and green and sustainable futures respectively, ward-level deprivation and environmental data have been used to make assumptions about the experiences of people living in that area; this information should be interpreted with caution.

Additionally, methodology and ethnicity categories vary depending on which source of health data have been utilised. This inconsistency in data collection can lead to multiple different conclusions being drawn from the same data, creating consequences when interpreting data within this report for healthcare and policy decisions.

f. Statistics

This report draws on evidence from a variety of research studies with different methodologies and results. Data throughout this report have been presented to two significant figures where possible; proportions may not add up to 100% due to rounding.

Below, is a brief overview of some key statistical terms to aid in interpretation of the findings.

Odds ratio (OR): Indicates the likelihood of an outcome or event occurring in one group compared with another. An OR of greater than one means there is an increased likelihood compared with the reference group; an OR of less than one means there is a decreased likelihood.

Risk ratio or relative risk (RR): Indicates the probability of an outcome in an exposed group to the probability of an outcome in an unexposed group. A RR of greater than one means the exposure increases the risk of at outcome.

Confidence interval (CI): Indicates the level of uncertainty around an estimate (e.g., a percentage or an OR) taken from a sample of a population. 95% CIs are calculated so that if samples were repeated taken from the same population, 95% of the time the true value would lie between the upper and lower bound of the CI. If the CIs surrounding two estimates overlap, there is no statistically significant difference between these estimates.

Hazard Ratio (HR): a measure of how the risk of an event changes over time between two groups. A HR of one means the risk is the same in both groups. A HR of greater than one shows a higher risk in one group.

In this report, "n" is used to represent the numerator of a percentage (e.g., the number of people with the event of interest) and "N" is used to represent the denominator (e.g., the population from which the numerator was drawn).

1. Introduction

1.1 Overview

1.1.1 Defining the Chinese Population

In 2023, China had the largest population of any country in the world at 1.4 billion (although population projections state that it will likely be overtaken in population size by India in 2023 or soon after) and is the largest country by land mass in Asia; roughly 20% of the global population is of Chinese nationality.(17, 18) Few countries have as wide of a variety of indigenous people as China, with many regional variations in culture and language.(17)

The Chinese National Population Survey 2010 provides insight into the ethnicities of China. 92% (approx. 1.2 billion) of the population of mainland China are Han Chinese, making the country predominantly ethnically homogenous.(19)

Although the Han ethnic group is native to China, they are not exclusively found in mainland China.(20) In Taiwan, the Han ethnicity makes up around 97% of the population; people of Han Chinese descent also make up about 75% of the Singapore population.(21, 22) Globally the Han ethnic group makes up approximately 18% of the global population, making it the largest ethnic group.(20)

Within the People's Republic of China, the density of Han ethnicity varies by geography, comprising 92% of people living in Hong Kong and 89% of those living in Macau. Those from Hong Kong may refer to themselves as 'Hong Kongers' to mark important political and cultural differences with mainland China.(1, 23, 24)

Within China, there are 56 officially identified ethnic groups; the largest minority and Indigenous communities are summarised in **Table 1**.

Table 1: Minority ethnic and Indigenous communities: China, 2010

Ethnic Group	Population (million)	Population (% of total Chinese population)
Zhuang	16.9	1.3
Hui	10.6	0.79
Manchu	10.4	0.77
Uyghur/Uighur	10.0	0.75
Miao	9.4	0.71
Yi	8.7	0.65
Tujia	8.4	0.63

Source: Chinese National Population Survey 2010 (19)

Due to the variation in Chinese identities and ethnicities across multiple geographies, the data presented throughout this report will focus on people who identify as ethnically Chinese instead of exclusively focusing on those born in mainland China. The only exception is where data is only available by country of birth where 'China' is included.

1.1.2 Culture

Providing an overview of Chinese culture may aid in increasing cultural competency and awareness, and result in the planning of more relevant health interventions.

Festivals

Several key events are celebrated by the Chinese community, including the Dongzhi Festival, Chinese New Year and Yuan Xiao Festival (Lantern Festival).

The Dongzhi Festival occurs around the winter solstice (usually between 21 to 23 December) and celebrates 'nature's harmonious balance of Yin and Yang energy'. Chinese New Year is celebrated from the first day of the first month in the Chinese lunar calendar and continues for 15 days. The Lantern Festival is a mid-autumn celebration which falls on the 15th of the 8th month of the Chinese calendar and coincides with the full moon during the middle of autumn in China.(25)

Attire

While Chinese people in the UK and China usually wear western-style clothing, there are four main distinct types of traditional clothing worn by the Chinese community. These are the Hanfu, Zhongshan suit (Mao suit), Tangzhuang (Tang suit) and cheongsam (qipao).

The Hanfu ('Han clothing') is the oldest of China's traditional clothes. People in modern China seldom wear Hanfu except on special occasions such as festivals and wedding ceremonies.(26)

1.2 Migration Patterns

1.2.1 Global Migration Patterns

China is the third largest country of origin for migrants globally, after India and Mexico. Current estimates suggest that there are over 10.7 million Chinese migrants overseas. When accounting for second and third generation migrants, this number rises to around 60 million.(27)

Data from 2010 shows the most common countries that Chinese migrants reside in; 65% were located in four countries – Indonesia (20%), Thailand (19%), Malaysia (16%) and the United States (10%).(28)

More recent trends in migration demonstrate that there has been an increase in the number of Chinese migrants to the UK. In 2019, emigration of Chinese populations to Organisation for Economic Co-operation and Development (OECD) member countries stood at 466,000, with 28% migrating to Japan, 16% to the United Kingdom and 13% to the United States.(27)

1.2.2 Migration to the UK

The Chinese community is one of the oldest in the UK. Some of the first Chinese migrants to Britain were documented during the 17th century when Britain began to trade with China. Settlements were mostly around the dock areas, such as Liverpool and London. Although migration from China has been ongoing since then, by the end of the Second World War there were still less than five thousand Chinese people living in Britain.(1)

A large increase in Britain's Chinese population was noted in the 1951 census, which then stood at 12,523. Among this population over 4,000 were from Malaysia and 3,459 were single males from Hong Kong. The spike in population was closely tied to the increased number of refugees following the end of the Chinese Civil War in 1949. During this period, there was free movement from those born in Hong Kong to the UK as citizens of UK colonies. Migration from Hong Kong was subsequently restricted by the 1962 Commonwealth Immigration Act and movement was repealed by the 1981 British Nationality Act. Migrants from Hong Kong were then subject to the same migration criteria and regulations as other citizens from mainland China.(29) The British Chinese population continued to grow, and by the 1981 census reached 154,363, 75% of which were born in the country, demonstrating a new phase of settlement.(2)

The number of Chinese-born residents also grew, with a double in population size from 22,000 to 48,000 during the period of 1991 to 2001. In the 2011 census this number had increased to 152,000, placing China as the eleventh highest country of birth for non-UK born residents. The 2011 census also provided more insight into the geographies in which the Chinese population have migrated from. The most common place of birth for people of Chinese ethnicity who migrated to the UK between 2007 and 2011 was mainland China (**Table 2**).(30)

Table 2: Arrival of Asian/Asian British Chinese population to the UK by top six most common geographies: England and Wales, 2007 to 2011

Place of Birth	Migration to the UK (2007 to 2011)
Mainland China	72,839
Hong Kong	12,438
Malaysia	7,916
Taiwan	3,558
Singapore	3,216
Vietnam	447
Total	**115,414**

Source: Office for National Statistics. CT0263, 2011 census (30)

Historical trend data extracted from the 2011 census demonstrated that migration from mainland China has increased since 1981, whereas migration from Hong Kong has decreased. This aligns with the historical context of migration discussed above. Additionally, there has been an increase of migrants identifying their ethnic group as Chinese from Taiwan, and a decrease from Vietnam during this same time period.(30)

The 2021 census provides a current snapshot of migration from the Chinese ethnic group from before 1981 to 2021 (**Table 3**). In 2021, 27% of the Chinese population was born in the UK, and 36% arrived in the UK between 2011 and 2021. Chinese migrants from 2011 to 2021 encompassed 3.7% of all migrant who arrived in the UK within this time period.(31)

Table 3: Migration of the Chinese population to the UK by year of arrival: England, 2021

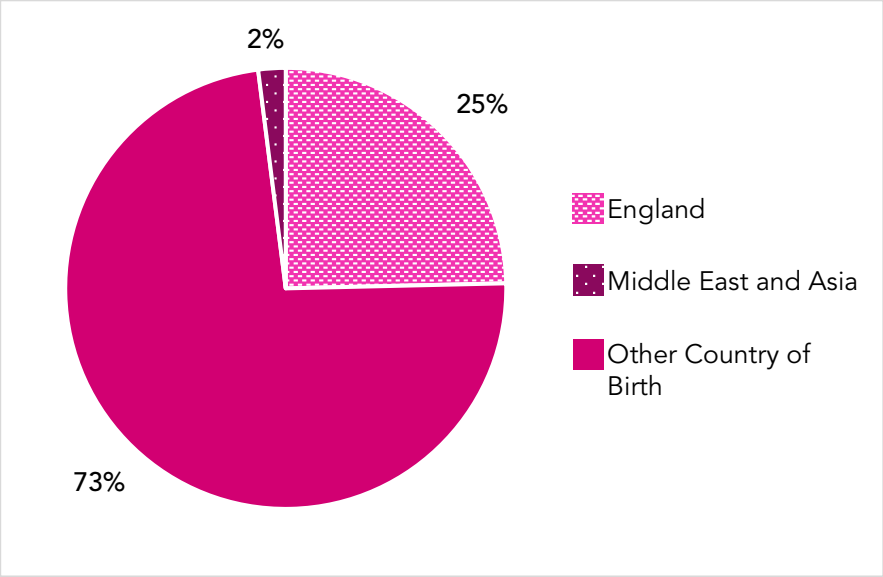
Year of Arrival in the UK	Population of Asian/Asian British: Chinese	Proportion of Total Migrant Population (%)
Born in the UK	114,275	0.24
Before 1981	41,242	3.0
1981 to 2000	53,968	3.3
2001 to 2010	68,281	2.6
2011 to 2021	153,397	3.7

Source: Office for National Statistics, 2021 census (32)

1.2.3 Migration to Birmingham

The distribution of country of birth in Birmingham among the Chinese ethnic group was similar to that in England and Wales. Overall, 25% (n=3,071) of residents identifying as 'Asian or Asian British: Chinese' in Birmingham in 2021 reported being born in the UK, 73% were born in 'Middle East and Asia' (**Figure 1**, see **Appendix 5.1** for data table). Information on specific country of birth by ethnic group is not yet available, however the 2011 census provided a more comprehensive breakdown (*see section 1.2.2*).(33)

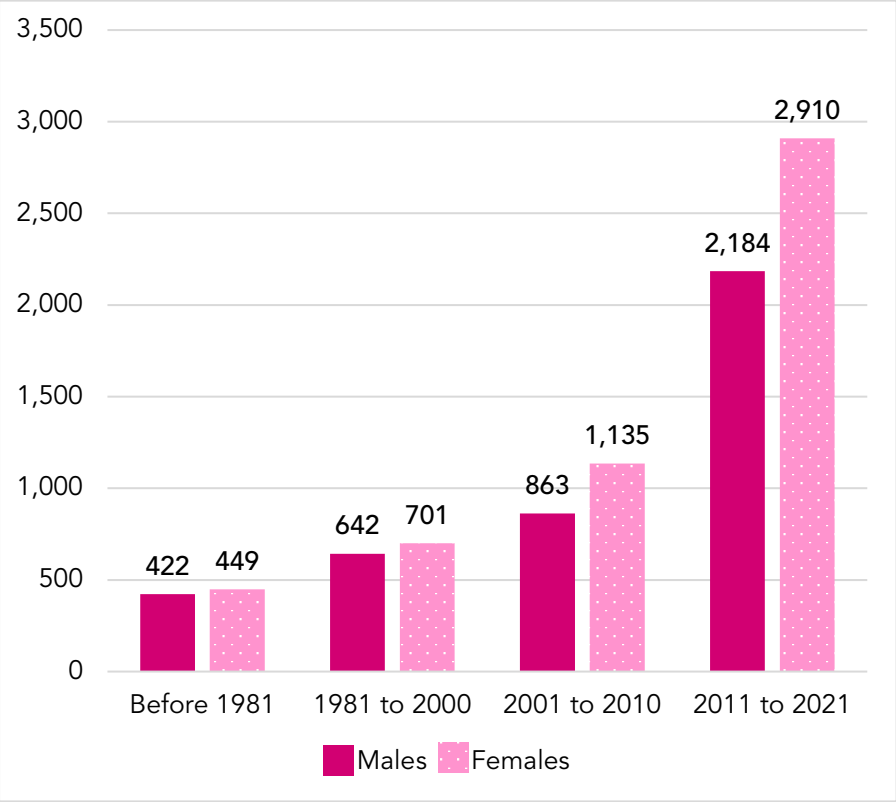
Figure 1: Country of birth among people identifying as 'Asian or Asian British: Chinese': Birmingham, 2021



Source: Office for National Statistics, 2021 census (33)

Among those not born in the UK in Birmingham, over half of the Chinese community in 2021 noted their year of arrival to the UK as between 2011 and 2021 (55%, n=5,094). Within the Chinese migrant population to the UK, data on migration by sex is also available. Migration trends typically showed a relatively even split between male and female Chinese migrants, with female migrants slightly outnumbering male migrants. This trend became more apparent in the 2021 census where 2,910 Chinese females stated that they migrated to the UK between 2011 and 2021, compared with 2,184 Chinese males (**Figure 2**, see **Appendix 5.2** for data table).(32)

Figure 2: Arrival of Asian/Asian British Chinese ethnic group to the UK by sex and year of arrival: Birmingham, 2021



Source: Office for National Statistics. RM027, 2021 census (32)

2021 census data is also available for the length of residence of Chinese migrants in Birmingham, excluding those born in the UK, 46% have been in the UK for 10 years or more and 36% have been in the UK for less than 2 years (**Table 4**).(34)

Table 4: Length of residence in the UK by ethnic group: Birmingham, 2021

Length of residence in the UK	Chinese (observation)	Chinese (%)
10 years or more	4,237	46
5 years or more, but less than 10 years	839	9
2 years or more, but less than 5 years	872	9
Less than 2 years	3,360	36

Office for National Statistics, 2021 census (34)

Although not directly comparable, this data may show the large portion of Chinese migrants who are higher education students, and therefore short-stay migrants. Higher education students born in China accounted for 45% of the Chinese-born residents in the 2011 census.(35) ***See section 2.5.1.2*** for more information on higher education students.

1.3 Language and Literacy

1.3.1 Language

1.3.1.1 Languages Spoken in China

Mandarin, or *Putonghua*, is the official language of China. There are three main varieties within Mandarin: Beijing, Chengdu and Nanjing.(17) In 2017, 904 million people in China were reported to speak Mandarin as their first language.(36)

There are hundreds of related Chinese languages, collectively known as *Hanyu* (simplified Chinese, traditional Chinese), spoken by 92% of people in China.(37) Approximately 300 minority languages are spoken by the remaining 8% of the population of China.(36)

After Mandarin, the four most spoken languages in China are Min, Wu (Shanghainese), Yue (Cantonese) and Jin.(36)

1.3.1.2 Chinese Languages in the UK

Within the UK, the most spoken Chinese languages and dialects differ from that in China. This may reflect differences in the naming of languages *e.g., Yue vs Cantonese* and other dialects of Chinese spoken in the UK such as Hakka. **Table 5** and **Table 6** summarise the Chinese languages spoken as a main language from the 2011 and 2021 census'. Overall, there has been an increase in Cantonese speakers and a decrease in Mandarin and 'All other Chinese' speakers since 2011. The census does not provide a detailed explanation as to which languages and/or dialects have been grouped in the 'all other Chinese' language option.(38)

Table 5: Resident population, aged three years and over, who speak a Chinese language as their main language: England and Wales, 2011

Language	Number of Speakers	Rank
All other Chinese	141,000	8th
Cantonese Chinese	44,404	26th
Mandarin Chinese	30,820	39th

Source: Office for National Statistics, 2021 census (38)

Table 6: Resident population, aged three years and over, who speak a Chinese language as their main language: England and Wales, 2021

Language	Number of Speakers	Rank
All other Chinese	118,000	14th
Cantonese Chinese	55,555	26th
Mandarin Chinese	22,025	35th

Source: Office for National Statistics, 2021 census (38)

Within Birmingham, trends in the Chinese language closely mirror national levels; all other Chinese languages are the 12th most spoken language in Birmingham, with 0.37% of the Birmingham population reporting this as their main language in the 2021 census (**Table 7**).(39)

Table 7: Resident population, aged three years and over, reporting a Chinese language as a main language: Birmingham, 2021

Language	Number of Speakers	Total Birmingham Population (%)
All other Chinese	4,063	0.37
Cantonese Chinese	1,729	0.16
Mandarin Chinese	1,017	0.09

Source: Office for National Statistics. Dataset TS024, 2021 census (39)

It is important to note that the above data does not represent the entirety of the population who speaks a Chinese dialect or language nationally or in Birmingham. The above data solely reflects main languages, this will not include Chinese residents who speak English as a main language (***see section 1.3.2***) and a Chinese language as a second or additional language.

In Birmingham in 2021, 53% (n=6,481) of the Chinese ethnic group noted 'East Asian languages' as their first language. The census did not provide additional detail on which languages were included within this category.(39)

1.3.2 English Proficiency

The 2021 census reported on how well different population groups could speak English (English or Welsh in Wales). Among the Chinese population in Birmingham, 46% (n=5,610) reported English as their main language and 35% had English as an additional language that they reported to speak 'well or very well'. This compares to 84% of people citywide who reported English as their first language, and 11% with English as an additional language could speak English well or very well.(40)

A high proportion of the Chinese population in Birmingham reported that they could not speak English well (15%) or at all (2%) compared with the city average (4% and 1% respectively).(40)

1.4 Demographics

1.4.1 Population Size

1.4.1.1 National Population

In England and Wales in 2021, 445,619 people identified as Asian/Asian British or Asian Welsh: Chinese, making up 0.7% of the total population, the same as in 2011.(3) As the 2021 census enabled self-identification of ethnicity, multiple ethnic groups denoting a Chinese identity were reported. This includes those with mixed or multiple ethnic groups containing one Chinese identity. The population size of each self-defined ethnic group is summarised in **Table 8**. When including all write-in data which refers to a Chinese ethnicity in some capacity, the total population number stands at 467,539.

Table 8: Self-reported Chinese ethnic groups: England, 2021

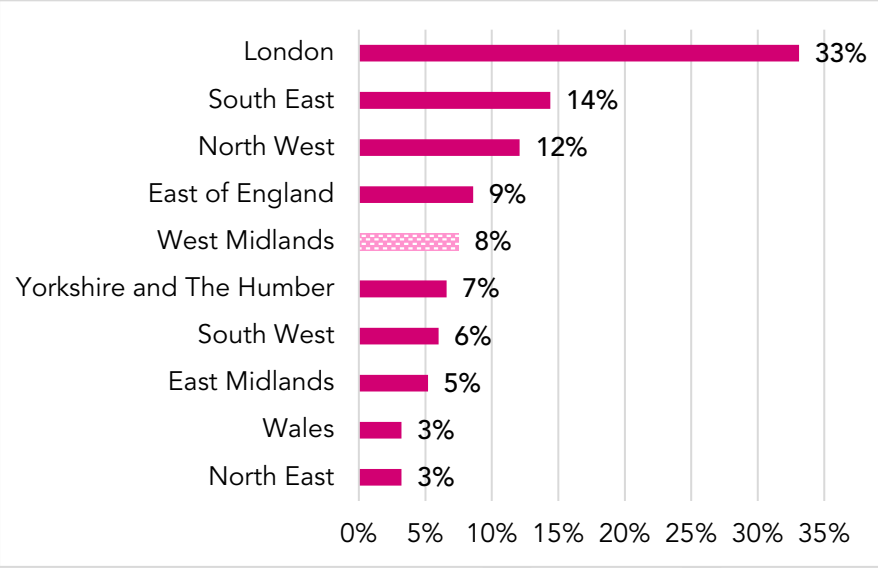
Ethnic Group (Census Category)	Population Size
Asian, Asian British or Asian Welsh: Chinese	445,619
Mixed or Multiple ethnic groups: Chinese	2,871
Mixed or Multiple ethnic groups: Chinese and other Asian	1,907
Mixed or Multiple Ethnic Groups: Chinese and White	7,642
Other Ethnic Group: Chinese	9,500

Source: Office for National Statistics. TS022, census 2021 (4)

For this report, data presented will include the 'Asian, Asian British or Asian Welsh: Chinese' ethnic group when investigating 2021 census outcomes as this is the group which is available for analysis in additional census datasets.

In England, the Chinese community is concentrated primarily in London (33%), the South East (14%) and the North West (12%) (**Figure 3**, see **Appendix 5.3** for data table).(4)

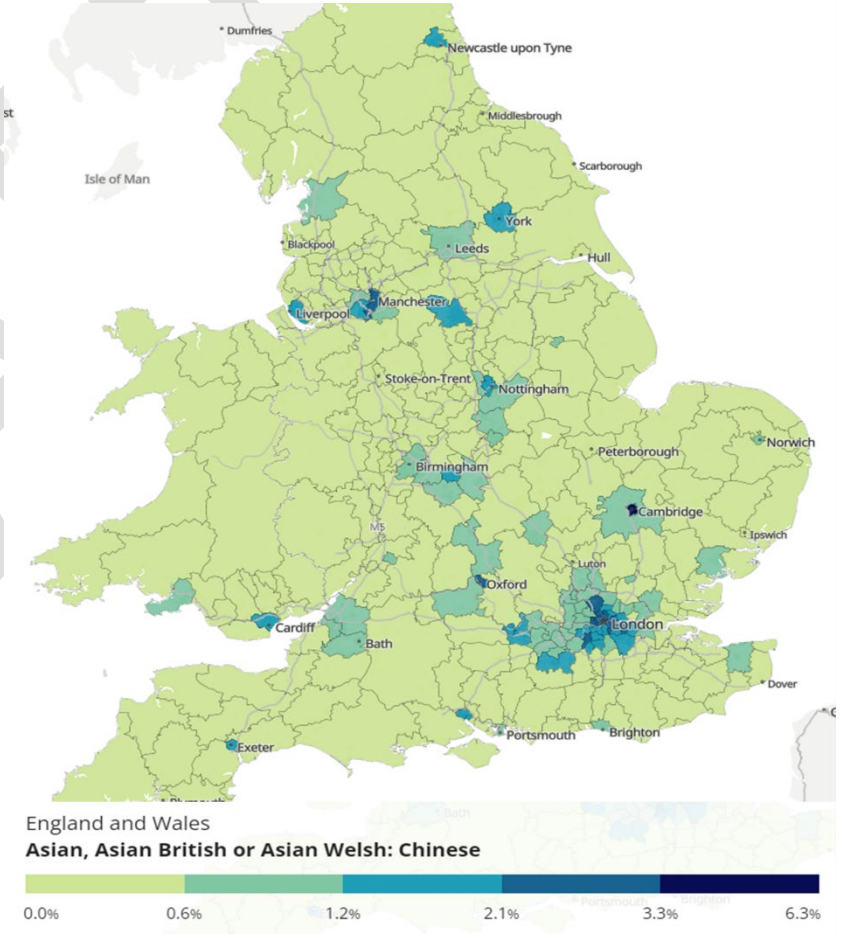
Figure 3: Distribution of the Chinese diaspora: England and Wales, 2021



Source: Office for National Statistics. TS022, census 2021 (4)

The Chinese diaspora is predominantly concentrated within the more populated cities, such as London, Birmingham and Manchester, and parts of England and Wales situated by universities, such as Oxford and Cambridge (**Figure 4**).(41)

Figure 4: Map of Chinese diaspora distribution: England and Wales, 2021



Source: Office for National Statistics, 2021 census map (41)

1.4.1.2 Regional Population

The 'Asian, Asian British or Asian Welsh: Chinese' ethnic group was the 13th largest reported ethnicity in the West Midlands in the 2021 census, with a population of 33,301.(4)

Within the West Midlands the Chinese diaspora is predominantly concentrated in Coventry and Birmingham, making up 1.3% and 1.1% of the total area population respectively (**Table 9**).(4)

Table 9: Distribution of the Chinese diaspora: West Midlands, 2021

Location	Chinese Population	% of Total Population
Birmingham	**12,487**	**1.1**
Coventry	4,571	1.3
Solihull	1,758	0.8
Sandwell	1,204	0.4
Stoke-on-Trent	1,073	0.4
Telford and Wrekin	818	0.4

Source: Office for National Statistics. TS022, census 2021.(4)

1.4.1.3 Birmingham Population

Birmingham has the 2nd largest Chinese diaspora of all local authorities in England and Wales (n=12,487), behind Manchester (n=12,644). However, of the five local authorities with the largest Chinese populations, Birmingham has the lowest proportion of a Chinese population compared with the overall population (1.1%) (**Figure 5**, see **Appendix 5.4** for data table).(4)

Figure 5: Distribution of Chinese diaspora by Local Authority: England, 2021

Source: Office for National Statistics. TS022, census 2021.(4)

The 'Asian, Asian British or Asian Welsh: Chinese' ethnic group was the 12th largest reported ethnicity in Birmingham in the 2021 census, with a population of 12,487. When tabulating all self-identified ethnic groups, which include Chinese ethnicity, this number stands at 12,918.(4)

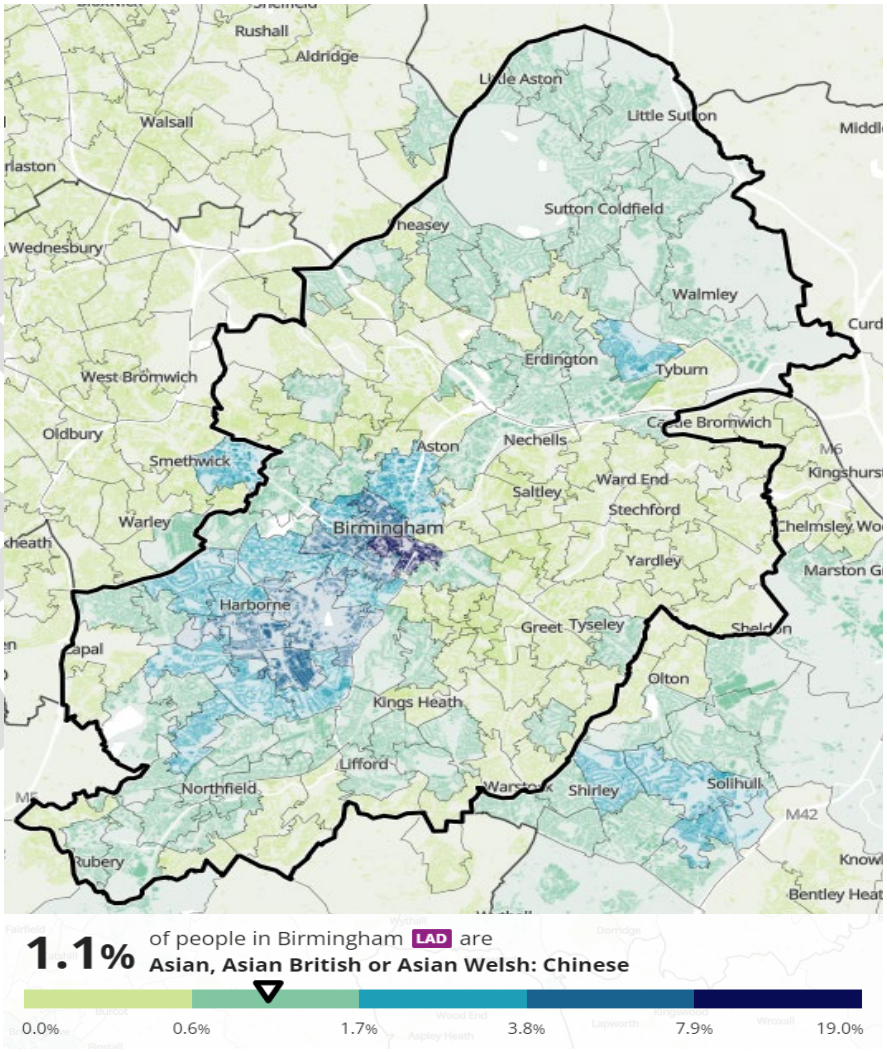
Within Birmingham the Chinese diaspora is predominantly concentrated in the areas of Digbeth, Central and Selly Oak where they comprise 13%, 7.4% and 6.0% of the total population respectively (**Table 10**, **Figure 6**).(4, 41)

Table 10: Distribution of Chinese diaspora by Middle Super Output Area (MSOA): Birmingham, 2021

MSOA	Total Population	Chinese Population	Chinese Population (% of MSOA)
Digbeth	6,136	800	13.1
Central	6,139	455	7.4
Selly Oak	15,999	956	6.0
Edgbaston South & University	10,271	606	5.9
Attwood Green & Park Central	7,605	477	5.1
Five Ways North	8,464	424	5.0
Metchley	7,434	347	4.7
Selly Oak Park & Lodge Hill	6,741	250	3.7
North Central & Dartmouth Circus	16,078	568	3.5
Ladywood – Summer Hill	7,895	238	3.0

Source: Office for National Statistics. TS022, census 2021.(4)

Figure 6: Map of Chinese diaspora distribution: Birmingham, 2021

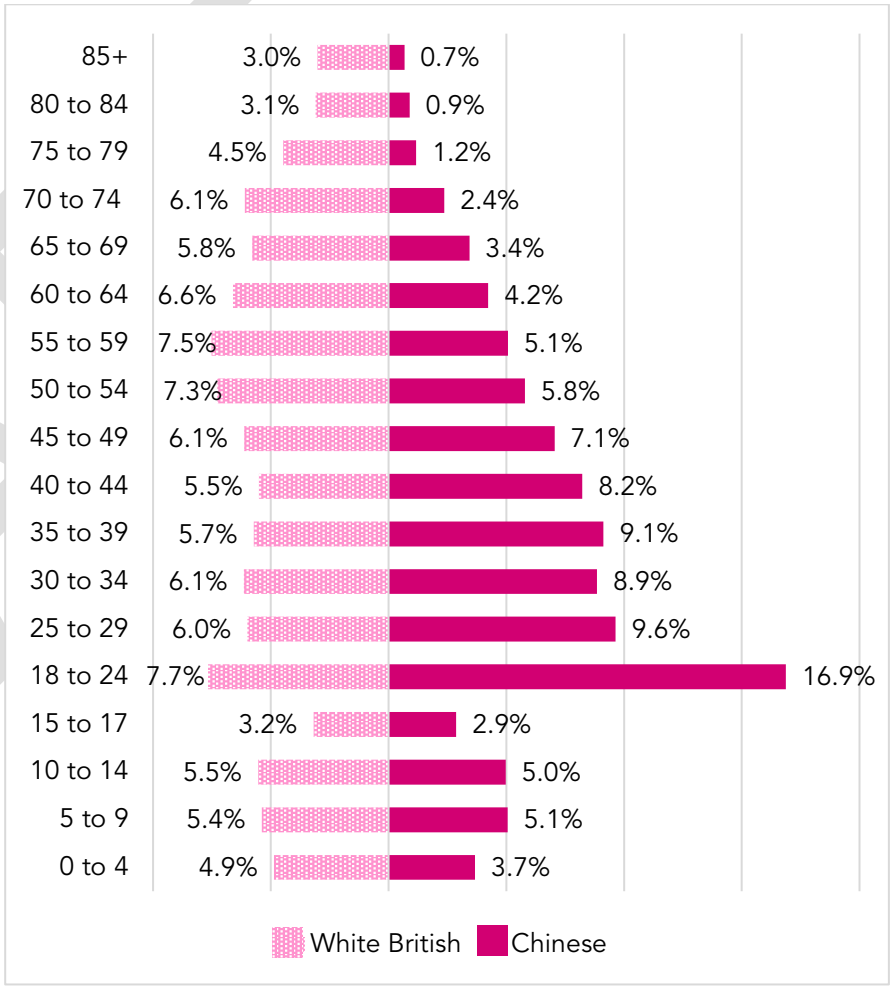


Source: Office for National Statistics. 2021 census.(41)

1.4.2 Age Profile

In 2021, just over half of the British Chinese population in England and Wales is under the age of 35 (52%), a younger age profile compared with the White British group (39% under the age of 35). The Chinese community has a higher proportion of its population aged 18 to 24 (17%) compared with the White British population (7.7%). A similar trend is observed on a local scale: 19% of the Chinese population in Birmingham is aged 20 to 24, compared with 7.4% of the White British population (**Figure 7**, see **Appendix 5.5** for data table).(42)

Figure 7: Age profile of Chinese and White British populations: Birmingham, 2021



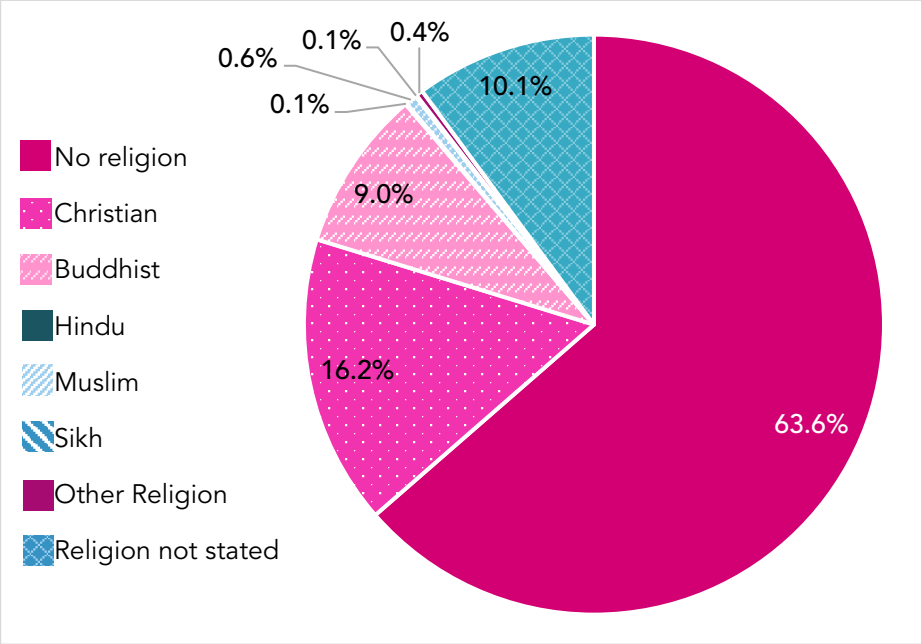
Source: Office for National Statistics. 2021 census.(42)

Since the 2011 census, the British Chinese population has seen a slight shift towards the older age brackets. However, this is in line with an overall ageing UK population. In 2011 8.0% of Chinese people were aged 60 years and above compared with 26% of White British people. In 2021 these values were 13% and 29% respectively.(42, 43) The population in Birmingham is slightly younger than the England and Wales averages, consequently in 2021 only 10% of the Chinese population in Birmingham was aged 60 and over (28% White British).(42)

1.4.3 Religion

Of the Chinese community within Birmingham in 2021, 64% (n= 7,939) identify as having no religion, which is higher than the average for all ethnic groups in Birmingham (24%) (**Figure 8**, see **Appendix 5.6** for data).(44)

Figure 8: Religious affiliation of the Chinese community: Birmingham, 2021



Source: Office for National Statistics. Census 2021 (44)

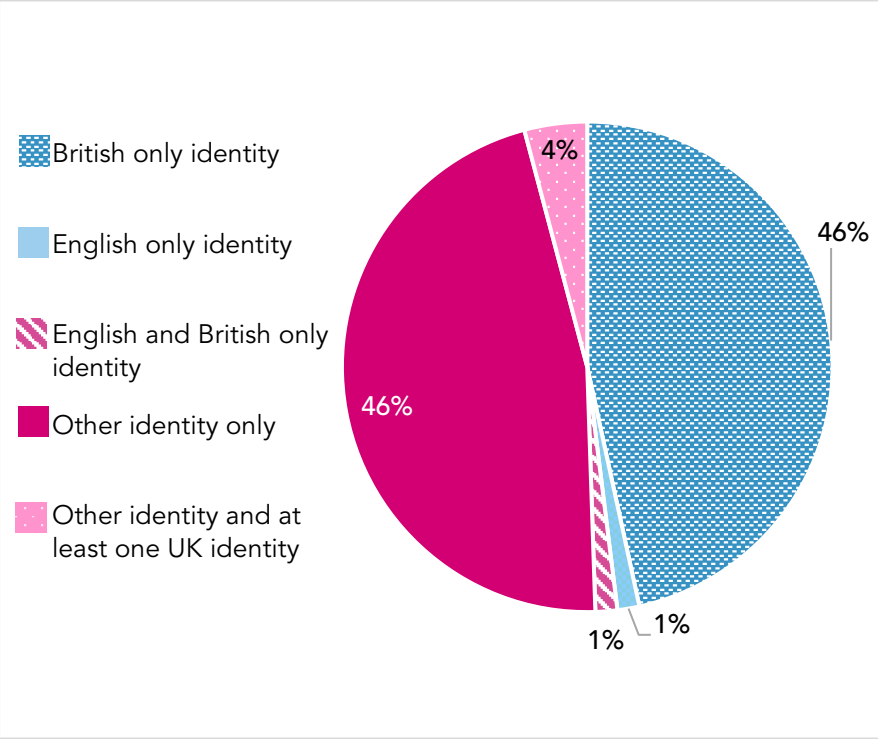
1.4.4 Identity

1.4.4.1 National Identity

Among Chinese residents based in Birmingham, around 46% (n= 5,797) note a "British only" identity, an increase from 33% in 2011 (**Figure 9**, see **Appendix 5.7** for data table). A similar number 46% (n=5774) identified as "other identity only" in 2021 (45).(46)

This differs slightly from national data where 51% (n= 218,386) note a "British only" identity and 38% (n=162,230) note "other identity only".(45) This disparity may be partially due to the high proportion of Chinese international students in Birmingham who's stay in the UK is transient.

Figure 9: National identity among the Chinese population: Birmingham, 2021



Source: Office for National Statistics. Census 2021 (45)

The 2021 census provided detailed insight into the number of residents citing "other identity only". It was found that within Birmingham 4,431 people had a national identity of "Other identity only: Middle Eastern and Asian: Eastern Asian: Chinese" and 859 had a national identity of "Other identity only: Middle Eastern and Asian: Eastern Asian: Hong Kong Chinese".(47) Data is also available on a national scale for the proportion of 'Other identity only' by ethnic group. 26% of the Chinese ethnic group nationally had a national identity of "Other identity only: Middle Eastern and Asian: Eastern Asian: Chinese". A breakdown of national identity among the Chinese ethnic group is summarised in **Table 11**.(45)

Table 11: National identity among the Chinese ethnic group: England, 2021

National Identity	Count	Chinese (%)
UK identity: British only identity	218,386	51
Other identity only: Middle Eastern and Asian: Chinese	112,906	26
Other identity only: Middle Eastern and Asian: Hong Kong Chinese	24,360	6
UK identity: Other identity and at least one UK identity	20,073	5
Other identity only: Middle Eastern and Asian: South-East Asian: Malaysian	14,591	3
UK identity only: English and British only identity	7,183	2

Office for National Statistics. Census 2021.(45)

1.4.4.2 Passports

Among the general population in Birmingham in 2021, 75% had a UK passport and 12% had no passport. In comparison, 55% of the Chinese ethnic group had a UK passport (n=6,817) and 3% had no passport (n=419). There was a sizable proportion of the Chinese population who reported having a Chinese passport (30%, n=3,784); 5% also reported having a Hong Kong (special administrative region) passport (n=570) and 3% had a Malaysian passport (n=399). This is slightly lower than nationally; 60% of people from the Chinese ethnic group had a UK passport.(48)

1.4.4.3 Sexual Orientation

Data on sexual orientation by ethnicity is currently only available by broad ethnic group e.g., Asian/Asian British. Therefore, this data does not provide a reliable estimate of sexual orientation among the Chinese population. Within the Asian/Asian British ethnic group in the 2020 Annual Population Survey (APS) reported by the Office for National Statistics (ONS), 93.6% identified as heterosexual or straight, 0.9% gay or lesbian, 0.9% bisexual, 0.5% other and 4.1% don't know or refuse. This is compared with 93.8% of the White British population who identified as heterosexual or straight, 1.9% gay or lesbian, 1.3% bisexual, 0.6% other, 2.4% don't know or refuse.(49) In the 2021 census, 88% of those from the Asian/Asian British ethnic group in Birmingham identified as heterosexual or straight, 10.9% did not answer, 0.3% gay or lesbian, 0.6% bisexual and 0.3% all other sexual orientation.(50),

1.4.5 Living Arrangements

The 2021 census provides insight into people's living arrangements, which included analysis on legal partnership status, people living alone, people with second addresses and whether people had moved in the year prior to census.

In Birmingham, the most common living arrangement for people aged 16 years and over was within an opposite-sex couple and married or in a civil partnership household (38%). A higher percentage of the Chinese population lived in these household types (43%), which is similar to the England and Wales average (43%) (43%).(51)

Furthermore, 33% of the Chinese population in Birmingham lived alone and 10% lived in a cohabiting opposite-sex couple household (36% and 10% Birmingham average).(51)

2. Community Profile

2.1 Getting the Best Start in Life

Key Findings

- Live births in the UK to women born in China represent 0.3% of all live births. China was the 26th most common country of birth for mothers in 2021, down from 11th in 2011.
- In 2020, Chinese children in the UK had the highest vaccine uptake of influenza vaccines (odds ratio 1.3), but the lowest vaccine uptake of the meningitis C vaccine (odds ratio 0.65) when compared with seven other ethnic groups.
- A Coventry based study from 2019 showed that Chinese pupils had the lowest rates of overweight and obese children at both Reception age (15%) and Year 6 (23%); 24% and 33% respectively for White British.
- In 2017, the proportion of 5-year-old children with obvious dental decay was second highest in the Chinese (42%) ethnic group (23% England average).
- 31% of children from the Chinese ethnic group lived in low-income households between 2016 and 2018 (20% UK average).
- Chinese preschool girls in Birmingham during the academic year 2018 to 2019 had the lowest percentage of girls reaching expected development levels (70%) compared with all girls (74%).
- Chinese pupils in England had the highest attainment of Key Stage 2 development standards in reading, writing and maths combined (70%), grammar, punctuation, and spelling (83%) and science (85%) for the academic year 2021 to 2022.
- Chinese pupils in Birmingham in the academic year 2018 to 2019 had the highest progress 8 score (1.04) of all ethnic groups (-0.03 England average).
- In the academic year 2020 to 2021 in England, 84% of pupils from the Chinese ethnic group achieved a grade 5 or above in GCSE English and maths (52% England average).

2.1.1 Fertility

Fertility among a population can be represented using the 'Total Fertility Rate (TFR)', which can be defined as "the average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year in question throughout their childbearing years".(52)

Fertility rates for many migrant groups in Britain have declined to around the national average, and below it in some cases, with a general decrease in TFRs noted for all women from 2004 to 2021.

However, in 2021 it was reported that non-UK born women overall continued to have higher TFRs (2.0) than UK-born women (1.5) in England and Wales.(53)

The ONS does not hold TFRs by ethnicity; data is only available for the mother's birth country. Due to small sample sizes, women born in China have been grouped into the 'Eastern Asia' category*. Women living in England and Wales born in Eastern Asia had a TFR of 1.5 in 2011, one of the lowest TFRs of women born outside of the UK. The lowest rate was seen among women born in Australasia at 1.3.(54) However, both populations had small sample sizes, so caution must be taken when interpreting these results. Additionally, it is unclear how these may have changed from 2011 to 2021, as updated data sets are not yet available.

The ONS also reported on geographical differences in TFR. In 2021 the TFR across England and Wales was 1.6, this was slightly lower than the Birmingham average (1.7). It is unclear how these regional differences affect the TFR of Chinese women in Birmingham.(55)

There is no data on the behaviours and perspectives of Chinese women in the UK which may influence their TFR. International context from China may provide some insight into the above data which refers to migrants from 'Eastern Asia', however clear conclusions cannot be drawn. Internationally, the Chinese Family Planning Program has been in place for more than three decades in China and has subsequently caused birth rates to decline. The program has included interventions such as the one-child policy, which ended January 1st 2016, and promotion of widespread use of long-term contraceptives.(56, 57) In 2010, officials made claims that the program had adverted 400 million births.(56) Although data from 2009 indicates that China's now low fertility rate was more a result of choice than policy restriction.(57)

2.1.2 Maternal Health

2.1.2.1 Maternal Mortality

Maternal mortality in England is likely higher among all minority ethnic groups compared with the White ethnic group. The Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK) Saving Lives, Improving Mothers' Care 2021 report outlined maternal mortality by ethnicity and by country of birth. Women from the 'Chinese/others' ethnic group showed different maternal mortality rates than for women born in China.(58)

Mothers of the 'Chinese/others' ethnic group from 2017 to 2019 had a maternal mortality rate of 9.37 per 100,000 maternities (95% CI 3.77 to 19.30). This was slightly higher than mothers from the White ethnic group who had 7.04 per 100,000 maternal mortalities (95% CI 5.74 to 8.55) during the same period, but lower than all other ethnic groups (**Table 12**).(58)

*Places of birth for 'Eastern Asia' include China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

Table 12: Maternal mortality rate by ethnic group: England, 2017 to 2019

Ethnic group (England only)	Maternities 2017 to 19	Total Deaths	Rate per 100,000 maternities	Relative risk	95% CI
White (inc. not known)	1,448,043	102	7.04	1 (ref)	-
Asian	187,408	22	11.74	1.67	1.00 to 2.66
Black	79,098	25	31.61	4.49	2.77 to 7.00
Chinese/ others	**74,743**	**7**	**9.37**	**1.33**	**0.52 to 2.84**
Mixed	32,436	5	15.41	2.19	0.70 to 5.28

Source: MBRRACE-UK. Saving Lives, Improving Mothers' Care 2021 (58)

Since 2015 to 2017, there has been decrease in maternal mortality across all ethnicities, except for the 'Chinese/others' ethnic group. In the MBRRACE-UK 2019 report, the maternal mortality rate for the Chinese/Other ethnic group from 2015 to 2017 was 9.28 per 100,000 maternities (95% CI 3.73 to 19.12). From 2015 to 2017 the maternal mortality rate for White mothers was 7.22 per 100,000 (95% CI 5.93 to 8.70).(58, 59)

The MBRRACE-UK 2021 report also found that women born in China and living in the UK had one of the highest relative risks (RR 3.65, 95% CI 0.74 to 10.90) of maternal mortalities compared with those born in the UK (**Table 13**). The highest risk was seen among women born in Nigeria (RR 4.4, 95% CI 1.75 to 9.37). Nearly a quarter of women in the UK who died between 2017 to 2019 (23%) were born outside the UK. Among the maternal mortalities for women born outside the UK, 39% were born in Asian, mainly Pakistan, Indian and China.(58)

Table 13: Maternal mortality by mother's country of birth: UK, Outside UK and China, 2017 to 2019

Woman's country of birth	Maternities 2017 to 19	Total Deaths	Rate per 100,000 maternities	Relative risk (RR)	95% CI
UK	1,582,356	137	8.66	1 (ref)	-
Outside UK	591,454	41	6.93	0.80	0.55 to 1.14
China	**9,488**	**3**	**31.62**	**3.65**	**0.74 to 10.90**

Source: MBRRACE-UK. Saving Lives, Improving Mothers' Care 2021 (58)

There is no data available on maternal mortality rates relating to Chinese women in Birmingham; it is unclear whether mortalities reported by MBRRACE-UK reflect the local mortality rate.

2.1.2.2 Antenatal Care

A 2017 study on maternity care for immigrant women provides useful insight into the barriers faced by minority communities. It notes that pregnant women who are recent immigrants, refugees or asylum seekers may have complex social factors which need to be factored in when considering access to maternity care. It was found that some of these women may not fully benefit from antenatal healthcare services in the UK due to potentially limited English language abilities, lack of knowledge about the health services and/or poor communication with staff delivering healthcare.(60)

National Institute for Health and Care Excellence (NICE) guidance suggests that healthcare staff should be given specific training to meet these women's needs. This observation may apply to Chinese women who have recently migrated to the UK and/or have limited English language skills and knowledge about Britain's healthcare services.(61)

One 2014 Scottish study of Chinese (n=15) and Pakistani (n=16) mothers investigated the quality and cultural relevance of care provided by healthcare visitors. Overall, it was found that the health visitors were viewed as supportive but sometimes lacked culturally appropriate knowledge and advice. For example, the Chinese mothers in the study emphasized the need for health visitors to acknowledge the often-multi-generational nature of Chinese families, which do not differentiate between the terms 'nuclear family' and 'extended family'. In addition, health visitors (n=8) were also interviewed in this study and many expressed anxieties about ensuring they were sensitive to families' religious and cultural beliefs. The study implied the importance in providing culturally relevant training for healthcare professionals.(62)

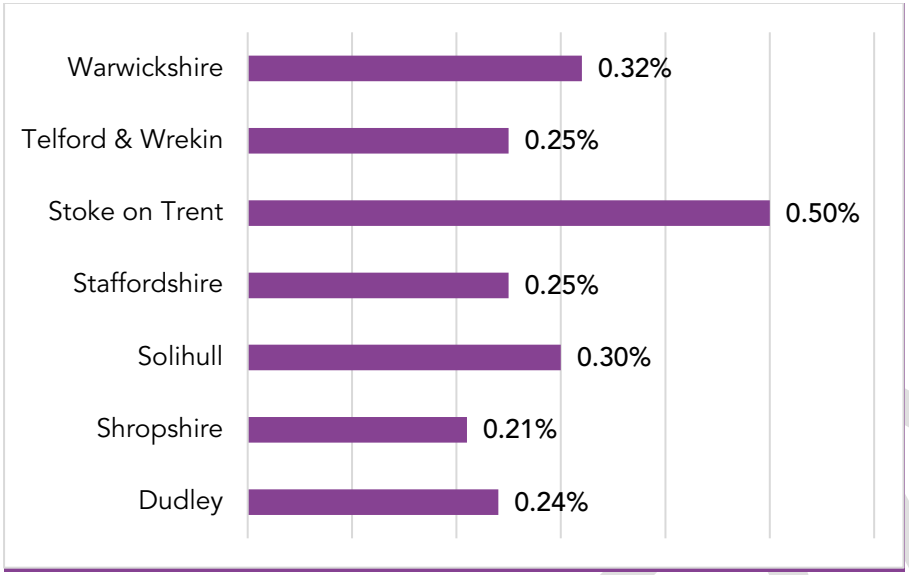
2.1.3 Infant Mortality, Stillbirths and Live Births

2.1.3.1 Live Births

Census 2021 data for England and Wales stated that 29% of live births were to non-UK born women; in Birmingham this rose to 43%. Of live births to non-UK born women, China was the 26th most common country, making up 0.3% of all live births in England and Wales. The proportion of live births to women born in China has seen a decrease over the last decade; in 2012, China was the 11th most common country, making up 0.6% of all live births.(53)

Regional data for the country of birth of the mother is only available for the top 10 countries of birth; therefore, data is not available on the number of live births to mothers from China in Birmingham. However, data from neighbouring Upper Tier Local Authorities (UTLAs) from 2012 to 2014 demonstrated that births to mothers born in China account for approximately 0.3% of all live births.(63) Some variation existed between UTLAs within the West Midlands; births to mothers born in China ranged from 0.21% to 0.50% of all live births in an area (**Figure 10**, see **Appendix 5.8** for data table).

Figure 10: Percentage of live births to mothers born in China: West Midlands Upper Tier Local Authorities, 2012 to 2014



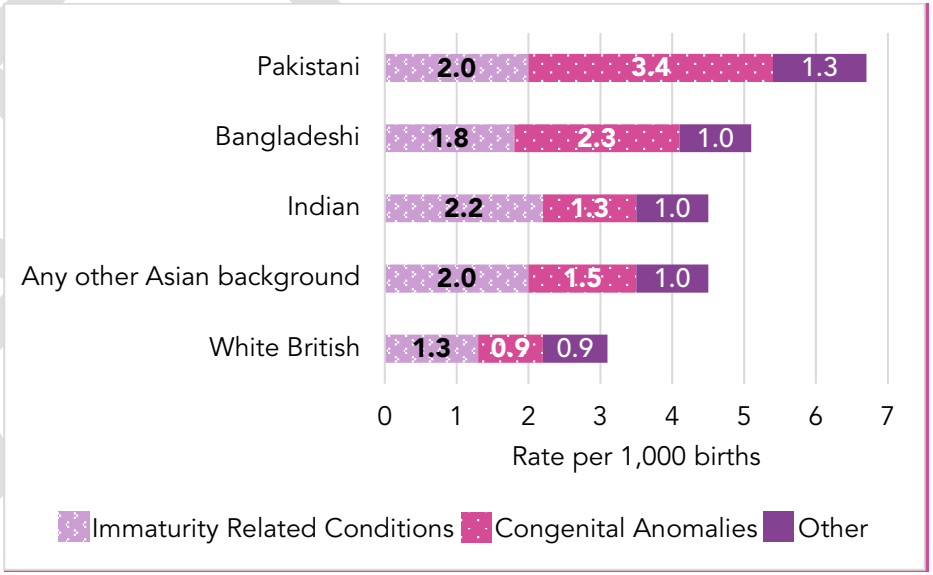
Source: Public Health England. Infant and Perinatal Mortality in the West Midlands (63)

2.1.3.2 Infant Mortality

Data is not available on infant mortality and stillbirths for the Chinese ethnic group. The 'Any other Asian background' group has been used as a proxy; data should be interpreted with caution.

Combined data for 2017 to 2019 on infant mortality in England and Wales by cause of death showed that for babies of 'Any other Asian background', immaturity related conditions were the most common cause of mortality (2.0 per 1,000). The 'Any other Asian background' ethnic group has lower or comparable infant mortality rates among the Asian subcategories but higher rates than the White British population (**Figure 11**, see **Appendix 5.9** for data table).(64)

Figure 11: Infant mortality rate (per 1,000 live births) by cause of death and ethnicity of the baby: England and Wales, 2017 to 2019 (combined)



Source: Office for National Statistics (64)

Infant mortality by all causes from 2019 to 2021 was much higher in Birmingham (7.0 per 1,000) than across England (3.9 per 1,000).(65) However, it is unclear how overall local trends affect infant mortality rates among the Chinese population in Birmingham.

2.1.3.3 Stillbirths

There is an absence of stillbirth data on a regional level, therefore data from England and Wales has been utilised.

Generally, ONS data indicates an overall decline in stillbirths in England and Wales since 2007. However, variations in rates of stillbirths by ethnic group are present. Within the Asian subgroup, stillbirths are lowest among the 'Any other Asian' (4.9 per 1,000) and Indian ethnic groups (4.9 per 1,000). Both ethnic groups had higher stillbirth rates than the White British population (3.5 per 1,000) (**Table 14**).(66)

Table 14: Live births, stillbirths, and infant mortality by ethnic group: England and Wales, 2017 to 2019 (combined)

Ethnic Group	Live Births (2019)	Stillbirths per 1,000 total births (2017 to 2019)	Infant deaths per 1,000 live births (2017 to 2019)
White British	377,916	3.5	3.2
Any other Asian background	16,169	4.9	4.4
Indian	20,627	4.9	4.5
Bangladeshi	9,505	5.2	5.0
Pakistani	27,573	6.1	6.8

Source: Office for National Statistics in The King's Fund Report (66)

2.1.4 Childhood Vaccinations

2.1.4.1 Routine Vaccinations

There is an absence of childhood vaccination rates among Chinese children in Birmingham, therefore data from the UK and scientific research from the North-West of England has been included.

In the UK, it is recommended infants and children should be vaccinated against a variety of infections to protect against serious illness, such as meningitis, measles, mumps, and rubella. Data from the QResearch database for children aged under 18 (n=2,447,875) shows vaccine coverage by ethnic group across the UK and demonstrates that vaccine coverage can vary notably with differing vaccines. The Chinese population had the highest vaccine uptake of the 8 ethnic groups included to be vaccinated against influenza (aOR 1.3, 95% CI 1.19 to 1.35), but the lowest uptake of meningitis C vaccination (aOR 0.65, 95% CI 0.60 to 0.70) (**Table 15**).(67)

Table 15: Childhood vaccination uptake by ethnicity; maximally adjusted odds ratios: United Kingdom, 2020

Ethnic Group	Influenza (n=1,617,686)	Rotavirus (n=497,524)	MMR (n=1,679,356)	Men C (n=1,679,356)
White British	1.00	1.00	1.00	1.00
Indian	1.16	0.76	1.10	0.68
Pakistani	0.72	0.77	1.25	0.91
Bangladeshi	0.98	1.00	2.20	1.19
Other Asian	1.04	0.78	1.06	0.81

Ethnic Group	Influenza (n=1,617,686)	Rotavirus (n=497,524)	MMR (n=1,679,356)	Men C (n=1,679,356)
Black Caribbean	0.49	0.51	0.88	1.17
Black African	0.93	0.75	0.76	0.92
Chinese	**1.27**	**0.58**	**0.78**	**0.65**

Source: Scientific Advisory Group for Emergencies, QResearch database (67)

One study (n=315,381) assessed vaccine uptake of DTap/IPV/Hib (diphtheria, tetanus, pertussis, polio, and Haemophilus influenzae type b) and dropout rates by ethnicity in nine London health service areas among children born between March 2001 to April 2015. Vaccine coverage was 91% among 'Chinese/Vietnamese' children (n=881), this was higher than across all ethnicities (87%) but slightly lower than in the White British population (92%).(68)

In addition to vaccination coverage, vaccines should be administered in a timely fashion to maximise population protection. Of the children who were fully vaccinated by 1 year old, the average time to completion of the primary series (3rd dose) was 145 days. The 'Chinese/Vietnamese' population had the timeliest completion of an entire vaccination course at 137 days.(68) In this study, children who had received three doses before 6 months of age were classified as receiving 'timely vaccination'. Timely vaccination among the 'Chinese/Vietnamese' population was the highest of all ethnic groups in the study, at 95%. For comparison, timely vaccination was 93% among the White British children in the study.

2.1.4.2 Human Papillomavirus Vaccine

Human Papillomavirus (HPV) is the collective name given to a group of viruses; "high risk" HPV are linked to cervical cancer, anal cancer, genital cancers and cancers of the head and neck. The HPV vaccine can drastically reduce the likelihood of developing cervical cancer; research has shown that incidence was reduced by 90% in young people vaccinated between ages 12 and 13 and by 34% in those vaccinated from ages 16 to 18.(69)

In a 2014 study, conducted in North West England, analysing awareness of vaccination and prevention programmes (n=142) within the Chinese population, only 25% (n=35) were aware of the HPV vaccine. However, awareness was not found to be linked to vaccine hesitancy as 74% (n=101) of the sample would be happy for their daughter to receive a HPV vaccine and 25% (n=34) were unsure.(12) It is unclear how this awareness is linked to uptake of the HPV vaccine among the Chinese population in Birmingham or England as routine data is not available by ethnic group.

2.1.5 Childhood Obesity

Measurements of childhood obesity are recorded at Reception (between 4 and 5 years of age) and Year 6 (between 10 and 11 years of age).

According to data from the National Child Measurement Programme, the prevalence of overweight or obese children at Reception age across England in 2021 to 2022 was the lowest amongst the Chinese ethnic group (14%). For comparison, the

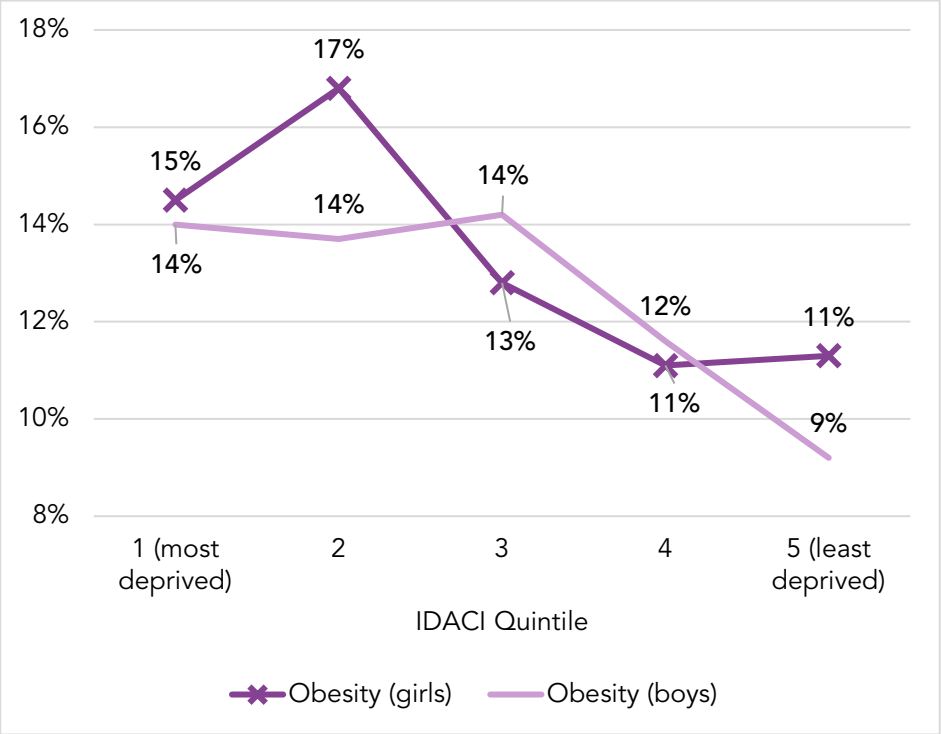
prevalence amongst the White British population was 23%. At Year 6, this rose to 31% and 36%, respectively.(65)

A 2019 study in Coventry measured overweight and obesity prevalence at Reception (n=28,407) and Year 6 (n=25,763), and the variation between ethnic groups. The study corroborated findings from national data and found that the Chinese participants had the lowest rates of overweight and obese children at both Reception age (15%) and Year 6 (23%); 24% of White British children at Reception age and 33% at Year 6 were reported to be overweight or obese.(70)

The study also calculated a zBMI for the populations. zBMI in this study "describes the standard deviation score of BMI-for-age-and-sex in relation for an external UK90 reference population". A zBMI score of 0 indicates BMI at the 50th centile for the UK90 reference population. Additionally, a zBMI of 1.04 indicates an overweight population (weight higher than the 84th centile) and 1.64 indicates an obese population (weight higher than the 94th centile) The average zBMI of Chinese children in Year 6 was 0.16, the lowest of all ethnic groups included in the study. For comparison, zBMI of White British children in Year 6 was 0.51.(70)

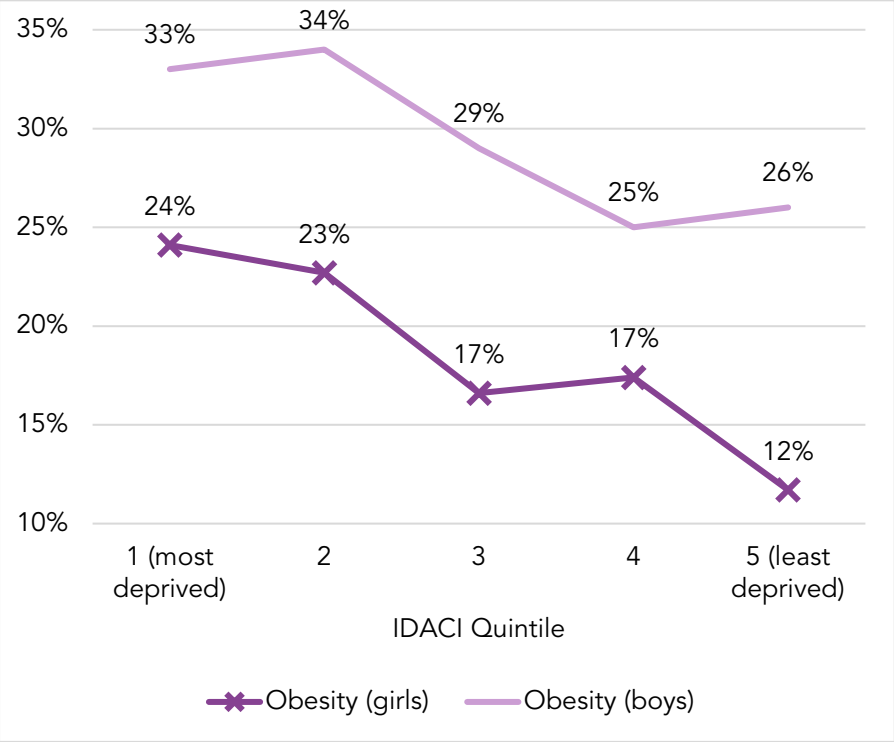
The occurrence of overweight and obese children can be influenced by multiple factors, including income deprivation affecting children. A 2020 cross-sectional study (n=8,701 Chinese children) investigated the inequality in overweight or obesity risk within ethnic minority groups in England in Reception and Year 6. The study utilised data from the 2015 to 2016 and 2016 to 2017 cycles of the National Child Measurement Programme Overall, the study found that children living in higher levels of deprivation were more likely to be overweight or obese (**Figure 12** and **Figure 13**, see **Appendix 5.10** and **Appendix 5.11** for corresponding data tables).(71)

Figure 12: Overweight and obesity prevalence within the Chinese ethnic group by Income Deprivation Affecting Children Index (IDACI) and sex in Reception: England, 2015 to 2017 combined



Source: Strugnell C *et al.,* (71)

Figure 13: Overweight and obesity prevalence within the Chinese ethnic group by Income Deprivation Affecting Children Index (IDACI) and sex in Year 6: England, 2015 to 2017 combined



Source: Strugnell C *et al.,* (71)

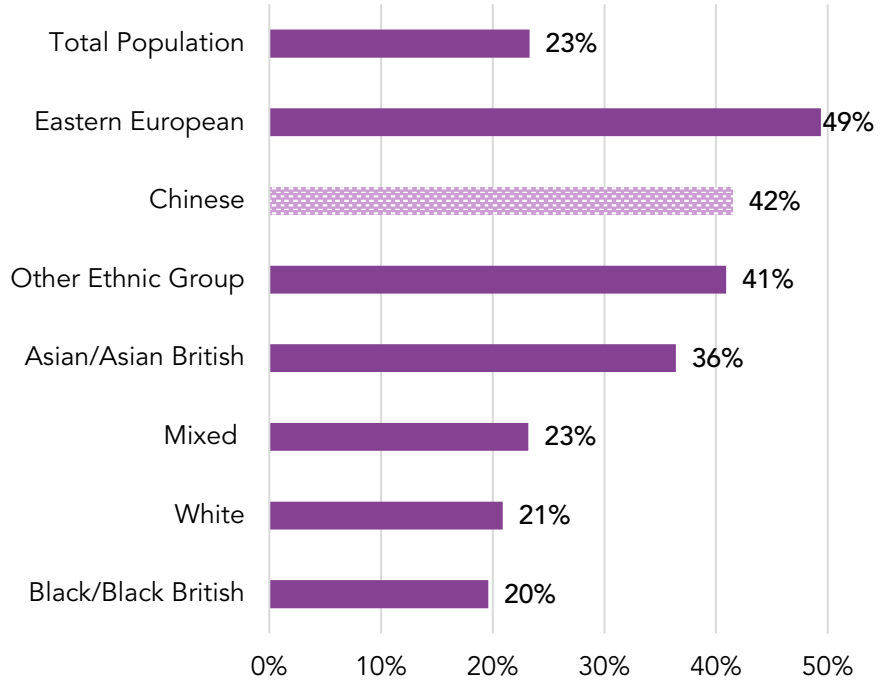
Qualitative research into the feeding habits of mothers from Chinese backgrounds in the UK (n=84) and Chinese migrant mothers in England (n=32) provide some insight into the low overweight and obesity rates among Chinese children. The studies participants often reported large degrees of perceived responsibility towards their child's diet and would focus on restricting large portions and unhealthy foods.(72, 73)

2.1.6 Dental Decay in Children

The annual Oral Health Survey of 5-year-olds by Public Health England (PHE) examines the prevalence of experience of dental decay (the percentage of children with one or more teeth with visually obvious dental decay experience).(74) Overall, 23% of 5-year-old children in England whose parents gave consent for participation in this survey had experience of dental decay in 2019. This is consistent with data from 2017 (23%).(5)

Dental decay among children from the Chinese ethnic group is available in the 2017 Oral Health Survey of 5-year-olds report. In the report, the proportion of 5-year-old children with obvious dental decay was highest in the Chinese (42%) and Eastern European (50%) ethnic groups, compared with the total population (**Figure 14**, see **Appendix 5.12** for data table).(5)

Figure 14: Dental decay at 5-years-old by ethnic group: England, 2017



Source: Public Health England, National Dental Epidemiology Programme for England (5)

Eastern European and Chinese children had the largest number of teeth affected by decay, with an average of 5.1 and 4.6 respectively. This is compared with an average of 3.4 among the total population with dental decay. The proportion of children with dental decay affecting one or more incisor was highest amongst Chinese children (22%); compared with 5.1% in the total population.(5)

A 2019 study on opinions towards dental decay from migrant Chinese mothers in Northern Ireland (n=18) suggested that the participants typically lacked child oral health related knowledge. Additionally, dental decay in children was viewed with a perception that it was an inevitable outcome, creating barriers when discussing the need for preventative dental care. This report suggests a potential need for an oral health promotion intervention that is culturally appropriate for Chinese migrant parents.(75)

Trend data from 2007 to 2022 shows that Birmingham typically has a higher percentage of 5-year-olds with visually obvious dental decay (**Table 16**). However recent data from 2021 to 2022 showed similar rates of dental decay in Birmingham (23.8%) compared with the England average (23.7%).(65) It is unclear how regional differences in dental decay affect Chinese children in Birmingham.

Table 16: Dental decay at 5-years-old by geography: Birmingham and England, 2022

Period	Birmingham (%)	England (%)
2007 to 2008	36	31
2011 to 2012	33	28
2014 to 2015	29	25
2016 to 2017	26	23
2018 to 2019	29	23
2021 to 2022	24	24

Source: Dental Public Health Epidemiology Programme for England, 2022 (65)

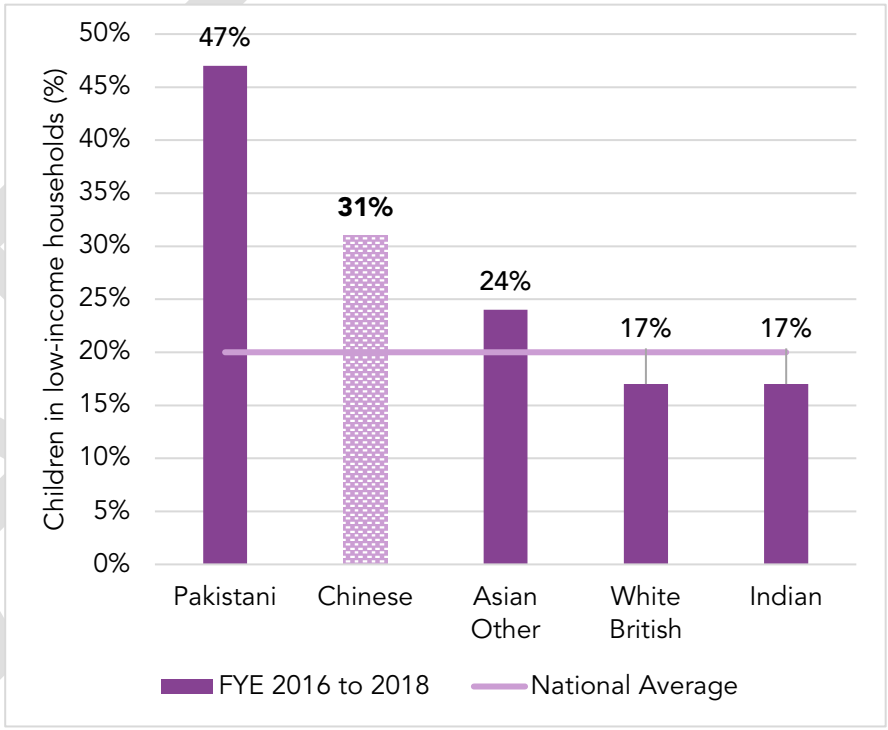
2.1.7 Child Poverty

One measure of childhood poverty is those living in households with relatively low income, which is defined as below 60% of the median household income, either before (BHC) or after housing costs (AHC).(76)

Family Resource Survey data using three-year average statistics from 2016 to 2018 indicated that a greater proportion of children from ethnic minority communities live in low-income households BHC in the UK. Just over a third (31%) of children from the Chinese ethnic group lived in low-income households, compared with the national average (20%) and the White British population (17%) (**Figure 15**, see **Appendix 5.13** for data table).(76)

Child poverty in Birmingham is high, in 2014 it was reported that 37% of children in the city lived in poverty (AHC). This was the second highest rate of child poverty across the UK's core cities, higher rates were only seen in Manchester (39%).(77) There is no comparable data nationally from the same year, however in 2018 31% of children in England were estimated to live in relative low income (AHC).(76) It is unclear how local poverty levels affect Chinese children living in Birmingham.

Figure 15: Children living in low-income households (BHC) by ethnic group: UK, 2016 to 2018



Source: Office for National Statistics using data from the Family Resource Survey (76)

In addition to absolute and relative incomes, material deprivation is also utilised to measure poverty and the living standard of children. Material deprivation refers to the "self-reported inability of individuals or households to afford particular goods and activities". In 2018, 12% of children in the UK fell below the low income and material deprivation threshold. 12% of children from the Chinese

ethnic group were reported as experiencing low income and material deprivation (**Table 17**).(76)

Table 17: Children experiencing low income and material deprivation by ethnic group: UK, 2016 to 2018

Ethnicity	Experiencing low income and material deprivation (%)
All	12
Bangladeshi	29
Pakistani	24
Black	22
Other	19
Mixed	17
Chinese	**12**
White	10
Asian Other	9
Indian	5

Source: Office for National Statistics using data from the Family Resource Survey (76)

Although children from the Chinese ethnic group were more likely to live in a low-income household, there was no reported difference in the ability to afford goods and services such as winter coats, school trips and hobbies compared with the general population.(76)

2.1.8 Children in Care

Statistics for children looked after in England, including adoptions, indicate that in 2022 there were 100 Chinese children in care. Data is not provided by percentage due to the small population size. This is far less than White British children, where 55,990 were in care, making up 68% of children in care. However, these figures must be interpreted with caution as they do not provide adjustments for the overall population for each ethnic group.

The statistics for the number of children in care are provided as a percentage of the total population, and do not clearly show whether a particular ethnic group is over-represented when compared with their percentage share of the population. However, children in care from minority ethnic groups tend to make up a higher percentage than the proportion of the total population from minority ethnic groups.(78)

Some additional demographic data on children in care and children in need is also available. In 2020, data from the children in need census reported that 13% of all children in need have a recorded disability. This was higher among Indian (20%), Pakistani (20%) and Chinese (19%) children.(79) It is important to note that not all children in need will be in social care settings.

Data from the Department for Education provides detailed on the source of referrals for children to social care. The largest source of referrals for Chinese children from 2019 to 2020 was schools or education services, comprising 43% of all referrals for Chinese children in care. This was higher than for White British children (19%) and for all children (20%). The lowest proportion of referrals from the police is seen in the Chinese ethnic group (17%); 29% for all children.(79)

2.1.9 Education

2.1.9.1 School Readiness

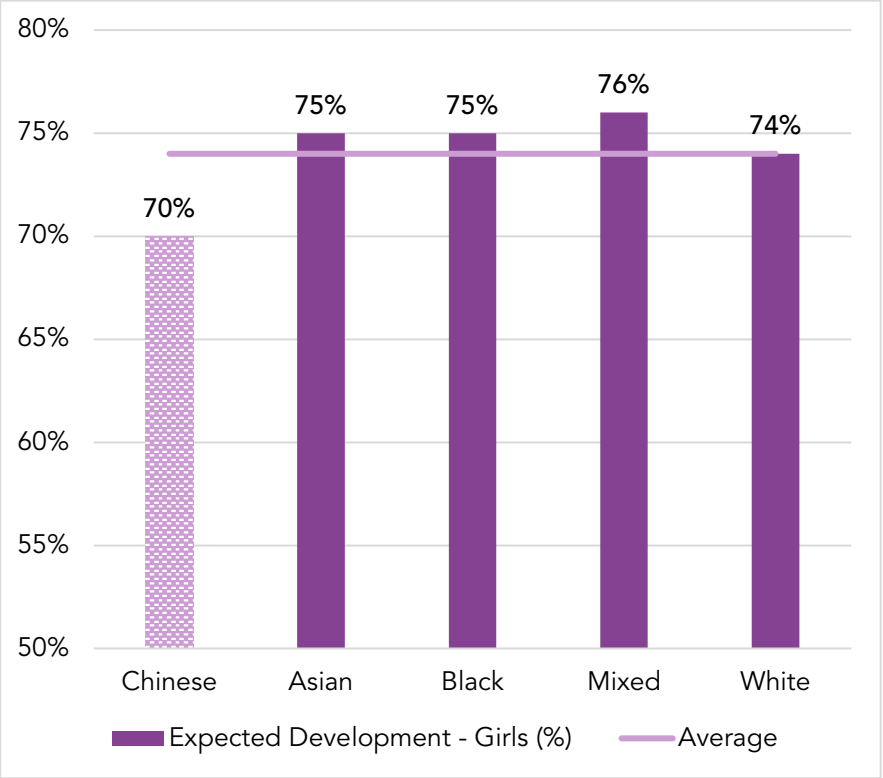
The Early Years Foundation Stage (EYFS) profile provides statistics on children's development at the end of the academic year when a child turns 5. The assessment framework evaluates progress towards 17 early learning goals across 7 areas, including physical development, communication and language and expressive arts and design. EYFS reforms were introduced in September 2021, making it impossible to directly compare 2021 to 2022 assessment outcomes with earlier years. Across England, 65% of children were reported to have a 'good level of development' from 2021 to 2022.(80)

Within the Chinese ethnic group, 75% had good development in England and 73% in the West Midlands, the highest of all ethnic groups. This compares to 67% of White British children in England and 66% in the West Midlands.(80)

The EYFS profile results for 2018 to 2019 also provide details on childhood development by ethnicity, sex, and LA. Typically, a higher proportion of girls reached expected development levels compared with boys within the same ethnic group. This was not observed within the Chinese ethnic group, where 70% of Chinese girls met expected development levels, compared with 79% of Chinese boys.(6)

Additionally, Chinese preschool girls had the lowest percentage of girls reaching expected development goals (70%) when compared with girls from all other ethnic groups included in the data (74%) (**Figure 16**, see **Appendix 5.14** for data table).(6)

Figure 16: Percentage of girls meeting expected development levels by ethnicity: Birmingham, 2018 to 2019

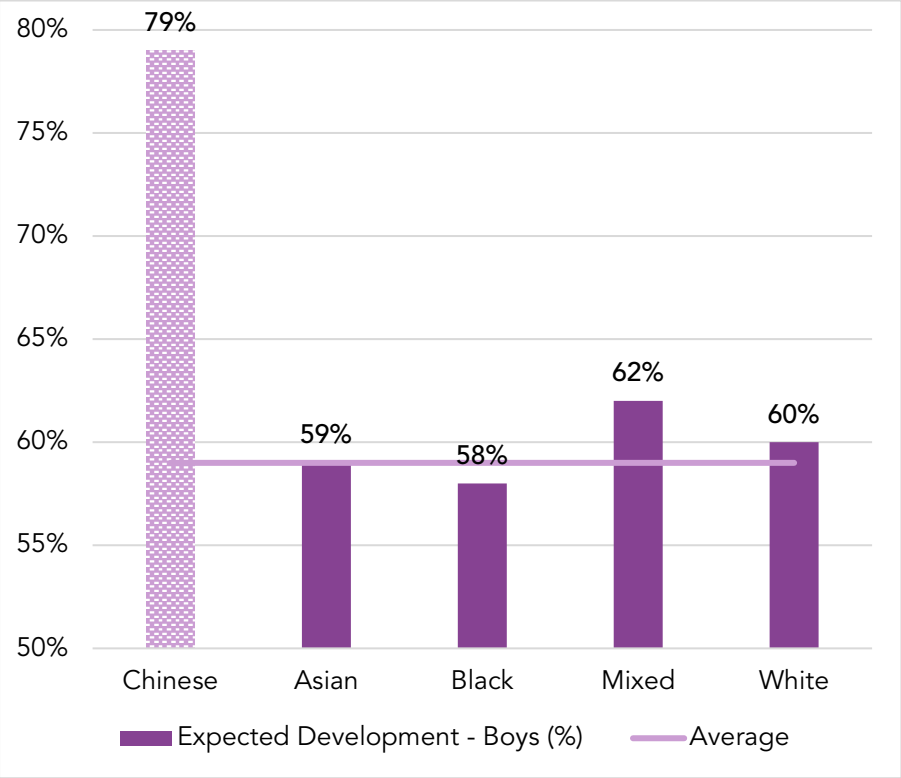


Source: Department for Education (6)

Overall, boys were less likely to meet expected development levels than girls (59%). However, Chinese boys had the highest percentage achieving expected development levels (79%) compared with boys

from all other ethnic groups in the dataset (**Figure 17**, see **Appendix 5.15** for data table).(6)

Figure 17: Percentage of boys meeting expected development levels by ethnicity: Birmingham, 2018 to 2019



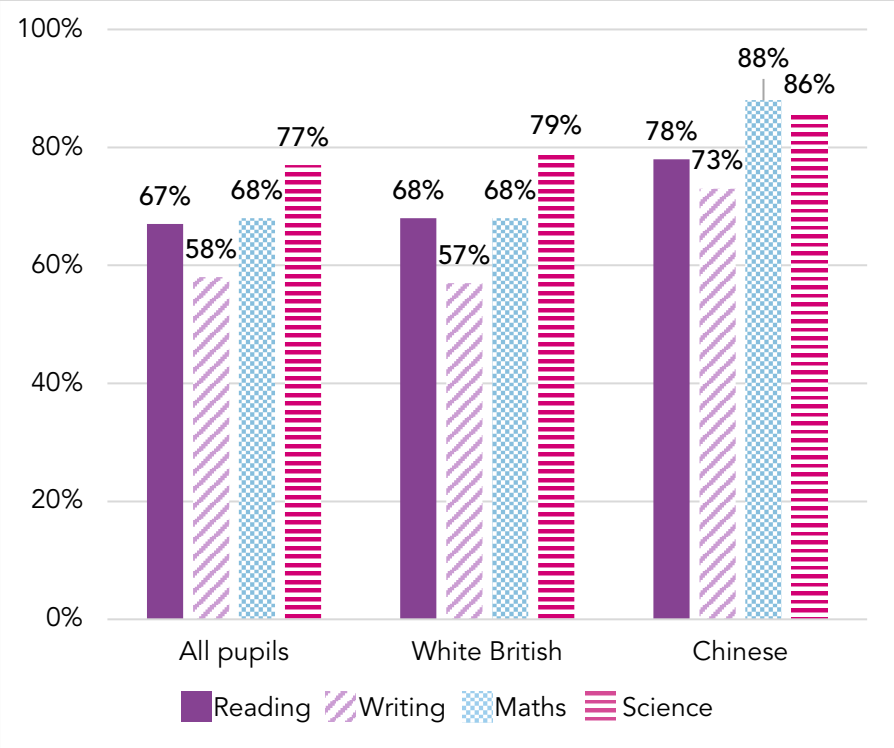
Source: Department for Education (6)

2.1.9.2 Key Stage 1 and 2

School pupils attending state-funded schools undergo a phonics screening check at the end of Year 1, typically aged 6 years. Pupils are also assessed at the end of Key stage 1 (KS1) (Year 2, aged 7 years) in reading, writing, maths, and science via national curriculum teacher assessments (TA). There has been a decrease in achievement from previous years due to disruption to learning caused by the pandemic.(81)

In the academic year 2021 to 2022, 75% of pupils in England met the expected standard in the phonics screening check in Year 1. The Chinese ethnic group showed higher attainment in this area with 86% of pupils meeting the expected standard for phonics. There is also less variance in gender among the Chinese ethnic group (85% boys, 86% girls) than the White British (73% boys vs 79% girls) and England average populations (72% boys vs 79% girls). Similar trends are also observed for the KS1 TA, as seen in **Figure 18** (see **Appendix 5.16** for data table). In almost all markers of attainment girls showed a higher percentage of pupils meeting the expected standards.(81)

Figure 18: Key stage 1 pupils meeting the expected standards in reading, writing, maths, and science by ethnic group: England, academic year 2021 to 2022



Source: Department for Education (81)

Data on attainment of Year 6 pupils via Key stage 2 (KS2) national curriculum assessments is also available. In 2021 to 2022, 59% of pupils in England met the expected standards for reading writing and maths (combined) compared with 70% of Chinese pupils (**Table 18**).(82)

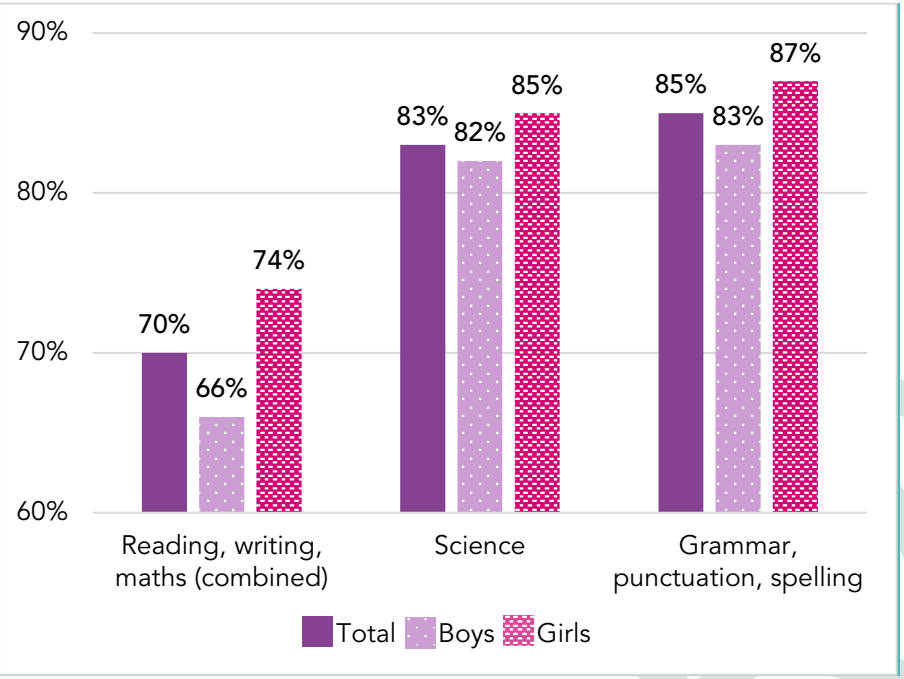
Table 18: Key stage 2 attainment by ethnic group: England, academic year 2021 to 2022

Key Stage 2 Attainment	All pupils (%)	Chinese pupils (%)	White British pupils (%)
Reading, writing and maths (combined)	59	70	58
Reading	75	78	75
Writing	69	75	69
Maths	71	93	70
Grammar, punctuation, and spelling	72	83	71
Science	79	85	79

Source: Department for Education (82)

There were some gendered differences in expected attainment within the Chinese ethnic group, as shown in **Figure 19** (see **Appendix 5.17** for data). Attainment at this level is typically higher in girls across multiple ethnic groups.(82)

Figure 19: Key stage 2 attainment of Chinese pupils by sex: England, academic year 2021 to 2022



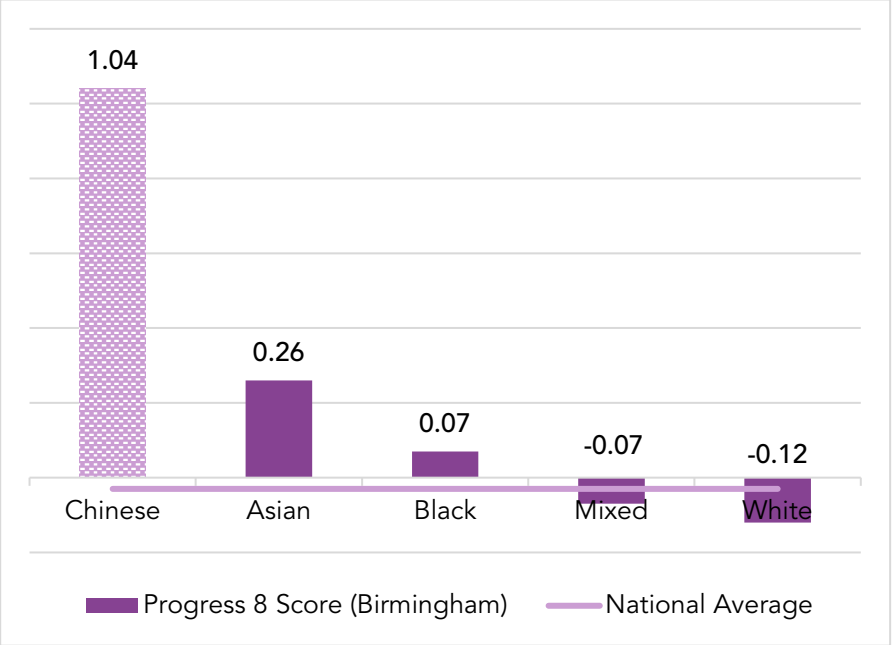
Source: Department for Education (82)

2.1.9.3 Progress 8

Progress 8 scores measure how much progress students make between 11 years old and 16 years old across eight core subjects, compared with other students with similar starting points. The baseline score of 0 indicates achievement at 16 which is in line with an average rate of progression compared with children with similar KS2 results. A score of +1 indicates a student has achieved one grade higher than children with similar KS2 results, and score of -1 shows a student achieved one grade lower than children with similar KS2 results.(76)

The average Progress 8 score across ethnic groups in England from 2018 to 2019 was -0.03. Chinese pupils in England achieved the highest Progress 8 score (0.86). The Progress 8 score for Chinese pupils in Birmingham from 2018 to 2019 was 1.04 (**Figure 20**, see **Appendix 5.18** for data table). For Chinese pupils, Birmingham was the 48th highest performing LA.(76)

Figure 20: Progress 8 score by ethnicity: Birmingham, academic year 2018 to 2019



Source: Office for National Statistics (76)

2.1.9.4 GCSE and A-level Attainment

In the academic year 2020 to 2021, 52% of pupils in England achieved a grade 5 or above in GCSE English and maths. This compares to 84% of pupils from the Chinese ethnic group, the highest of all ethnic groups. In nearly all ethnic groups, a higher percentage of girls achieved grades 5 or above than compared with boys (**Table 19**).(83)

Table 19: Percentage of pupils achieving a grade 5 or above in GCSE English and maths by gender and ethnicity: England, academic year 2020 to 2021

Ethnic Group	Boys (%)	Girls (%)
Chinese	**81**	**86**
White British	47	55
Average (all ethnic groups)	48	56

Source: Department for Education (83)

Educational attainment, on average, is slightly lower in Birmingham, with 50% of students in the academic year 2020 to 2021 achieving a grade 5 or above in English and maths GCSE. There is also a difference between the Chinese population nationally and in Birmingham; 69% achieved grade 5's or above in Birmingham. Similar trends in achievement by gender was also seen in Birmingham, as shown in **Table 20**.(83)

Table 20: Percentage of pupils achieving a grade 5 or above in GCSE English and maths by gender and ethnicity: Birmingham, academic year 2020 to 2021

Ethnic Group	Boys (%)	Girls (%)
Chinese	**69**	**70**
White	46	52
Average (all ethnic groups)	50	55

Source: Department for Education (83)

Trends in academic attainment within the Chinese ethnic group continue to A-level results; 37% of Chinese pupils in the academic year 2021 to 2022 achieved three A* to A grade A-levels, and 94% achieved two or more A-levels. This is the highest attainment for all ethnic groups. For comparison, 20% of White British pupils achieved three A* to A grade A-levels and 87% achieved two or more A-levels during the same period.(84)

2.1.9.5 Special Educational Needs

In England, from 2021 to 2022, 13% of pupils had a Special Educational Need (SEN) and 4.0% had an Education, Health, and Care (EHC) plan. The Chinese ethnic group had the lowest rate of SEN among all ethnic groups, 5.0% had a SEN and 2.3% had an EHC plan.(83) For Chinese pupils in Birmingham, 5.0% had SEN support and 2.0% had an EHC plan.(85)

Data from the academic year 2022 to 2023 provides insight into common special educational needs among pupils in Birmingham.

The most common SEN among Chinese pupils in Birmingham were autistic spectrum disorder (2.5%, n=50) and speech, language, and communication needs (1.8%, n=36). These are both lower than autistic spectrum disorder (4.6%, n=2,480) and speech, language, and communication needs (4.1%, n=2,183) among White British pupils.(85)

One study analysed new autism diagnoses between 2014 and 2017 (n=102,338) of pupils in English schools by ethnic group. Within the Chinese sample population (n=349) the rate of autism was noted as 327.1 per 100,000 pupils, this is lower than the White British (431 per 100,000) and Black (466.9 per 100,000) ethnic groups but higher than the Asian (276.9 per 100,000) ethnic group.(86)

In every ethnic group, children with any SEN achieved a grade 5 or above in GCSE English and maths less often than those without an SEN, see **Table 21**.(83)

Table 21: Percentage of pupils achieving a grade 5 or above in GCSE English and maths by ethnic group and SEN: England, academic year 2021 to 2022

Ethnic Group	No SEN (%)	Any SEN (%)
Chinese	**86**	**47**
White	57	19
Average (all ethnic groups)	58	18

Source: Department for Education (83)

2.1.9.6 School Exclusions

Rates of temporary exclusions in England for the academic year 2017 to 2018 were 0.5% for the Chinese ethnic group, compared with 5.7% (570 per 10,000 pupils) for the White British ethnic group. The Chinese ethnic group had the lowest rate of temporary exclusions.(87)

The temporary exclusion rate among Chinese pupils in Birmingham in the academic year 2017 to 2018 was lower than the national average (0.29%), however, this data should be interpreted with caution as there was a small sample size (n=3). The temporary exclusion rate for White British pupils in Birmingham was 4.8%.(87)

More recent data shows suspensions and exclusions by term. In the 2021 to 2022 Autumn term in Birmingham the suspension rate for Chinese pupils was 0.19%, compared with 3.3% for White British pupils.(88)

2.1.9.7 Free School Meals

In the academic year 2022 to 2023, the Chinese ethnic group had one of the lowest percentage of students who were eligible for free school meals (FSM) at 7.8%. Whereas, 23% of White British children and 24% of all pupils in England were eligible for FSM.(85)

Eligibility for free school meals was higher in Birmingham than the England average for the academic year 2022 to 2023, with 38% of pupils eligible for FSM. In Birmingham, 12% of Chinese pupils and 36% of White British pupils were eligible for FSM.(85)

In every ethnic group, children who were eligible for FSM were less likely to achieve a grade 5 or above in GCSE English and maths (**Table 22**).

Table 22: Percentage of pupils achieving a grade 5 or above in GCSE English and maths by ethnic group and FSM eligibility: England, academic year 2020 to 2021

Ethnic Group	No FSM (%)	FSM (%)
Chinese	**84**	**80**
White British	56	25
Average (all ethnic groups)	57	30

Source: Department for Education (83)

2.2 Mental Wellness and Balance

Key Findings

- Chinese men in 2019 scored the lowest across all ethnic groups in England on the Warwick-Edinburgh Mental Wellbeing Scale (50.8), also much lower than Chinese women (52.3).
- The Chinese ethnic group in England had one of the lowest detention rates for detentions under the Mental Health Act (64 per 100,000) compared with all other ethnic groups from 2021 to 2022 (69 per 100,000 White British).
- The Chinese community in contact with mental health services in the UK were more likely to have been admitted through compulsory admission (67%) than the general population (47%).
- Research suggests that the Chinese ethnic group typically do not contact mental health services unless during a mental health crisis, therefore mental health statistics are likely under-reported.
- According to the HSE for 2011 to 2019, 73% of the Chinese ethnic group in England had drunk alcohol within the last year and 24% in the last week. This compares to 89% and 67% in the White British population, respectively.
- The proportion of alcohol related hospital admissions by people from the Chinese ethnic group was low from 2014 to 2015, demonstrating relative low risk of alcohol misuse.
- There is limited data on drug use, however data from the UK Drug Policy Commission report in 2010 suggests lower drug use in the 'Chinese/Other' ethnic group (5.7%) than the White ethnic groups (11%).
- Chinese adults had some of the lowest smoking rates across all ethnic groups in England: 7% were current cigarette smokers (19% White British).
- According to the HSE, Chinese men had a higher current smoking rate (9.2%) than Chinese women (1.7%).

2.2.1 Mental Health

2.2.1.1 Prevalence of Mental Illness

Mental health is an increasingly important and common health concern across the country. According to Mind UK, 1 in 4 people will experience a mental health problem of some kind each year in England. The amount of people with common mental health problems went up by 20% between 1993 to 2014, and the percentage of people reporting severe mental health symptoms in any given week rose from 7% in 1993, to over 9% in 2014.(89)

Recent data from the 2022 English GP Patient Survey (GPPS) looked at patients citing mental health condition(s) as a long-term condition. Data on the Chinese population indicated that mental health experiences were roughly half (6%, n=341) that of the total population (12%, n=78,912) and the White British population (14%, n=65,296).(11) No data is available on the Birmingham Chinese population, or the experience of specific mental health conditions among the Chinese population. However, some studies have analysed self-harm and suicide rates based on clinical data by ethnic group.

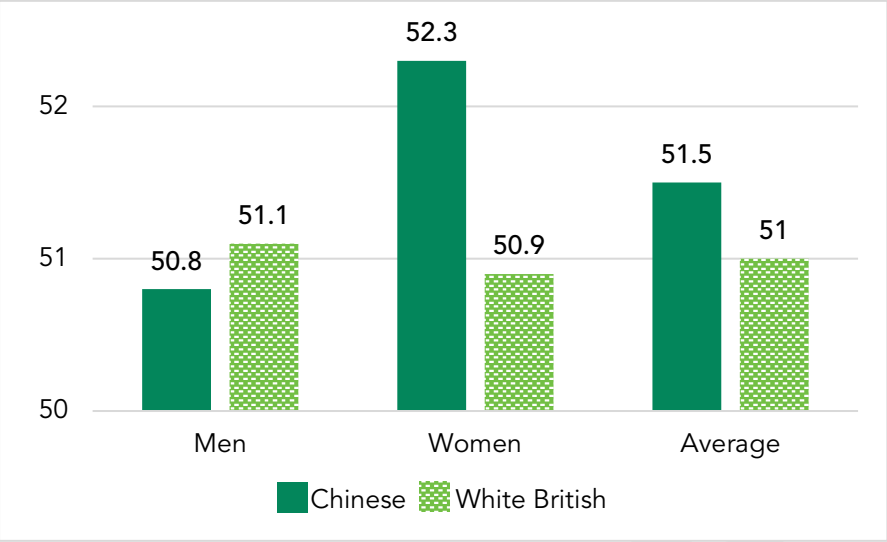
In a 2015 study using self-harm presentation data from 1997 to 2011 within three hospitals in Manchester, the prevalence of self-harm among the Chinese group (n=45) ranged from 0.4 to 0.6 per 1,000, compared with 2.6 to 3.8 per 1,000 within the White group (n=7,111).(90) Suicide rates within the Chinese population are also generally lower than the White population. A 2021 report reviewed annual age-standardised suicide rates in England and Wales within 12 months of contact with mental health services from 2007 to 2018 by ethnic group. The study found that the age-standardised suicide rate, based on general population denominators, among the Chinese ethnic group sample (n=46) was 1.41 per 100,000 compared with 2.73 per 100,000 in the White ethnic group sample (n=13,567).(91)

The study also looked at overall rate of death by suicide per 100,000 people in contact with mental health services. The average overall rate of suicide for people in contact with mental health services was 89.5 per 100,000 for White patients, compared with 147.1 per 100,000 for Chinese patients. This was the highest recorded suicide rate of all ethnic groups, although estimates were based on small population numbers.(91) Another study from southeast London in 2019 corroborated these findings, showing elevated suicide rates amongst Chinese people experiencing unipolar depression (n=117).(92) These studies may aid in examining the effects of differential help-seeking behaviour by ethnic group.

2.2.1.2 Warwick-Edinburgh Mental Wellbeing Scale

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) can be utilised to get a broader understanding of mental wellbeing. The WEMWBS scale has been developed as a tool to monitor the mental wellbeing of the general population aged 13 to 74; the scores range from 14 to 70. Average WMBWBS scores by ethnic group have been captured by the Health Survey for England (HSE). In 2019, the mean WEMWBS score of the Chinese population (51.5) was similar to the White British population (51.0). However, when scores were broken down by gender, Chinese men had the lowest scores among men across all ethnic groups (**Figure 21**, see **Appendix 5.19** for data table).(7)

Figure 21: Age standardised WEMWBS scores by sex and ethnic group: England, 2019



Source: NHS Digital, Health Survey for England (7)

2.2.1.3 Use of Mental Health Services

From 2021 to 2022, people from the Chinese community in England had a detention rate of 64 detentions per 100,000 people under the Mental Health Act, one of the lowest of all ethnic groups. This was slightly lower than the White British population at 69 detentions per 100,000 persons.(93) The Chinese population in England had low use of NHS-funded secondary mental health and learning disability services, at 1,631 adults per 100,000 compared with 4,041 adults per 100,000 in the White British population from 2020 to 2021.(94) Full datasets for detentions and use of secondary services can be found in **Appendix 6**.

There is likely an under-representation of the Chinese community in mental health services. Studies suggest that Chinese people may not contact mental health services when they first develop problems; many only utilise these services during a crisis. This pattern is represented within data from the Care Quality Commission 2010 which showed that Chinese people in the UK were less likely to seek help from primary care services for psychological distress but are more likely to face compulsory admission than the national average. On average, in the UK, 67% of the Chinese population in contact with inpatient acute mental health services were admitted through compulsory admission, compared with 47% of the general population.(8, 95)

Published research investigating some of the barriers to accessing mental health support faced by the Chinese community in the UK found that stigma surrounding mental health was one of the main barriers. There was also a preference for family support rather than medical intervention, and a hesitancy towards support from outside a close cultural group.(8, 96) Language difficulties, as well as cultural practices were also identified as barriers. (95, 96, 97)

2.2.2 Alcohol

2.2.2.1 Alcohol Consumption

Almost all ethnic minority groups were less likely than the general population to drink alcohol on a regular basis. Within the Chinese ethnic group in England, 73% have drunk alcohol within the last year and 24% in the last week, as seen in **Table 23**.(7)

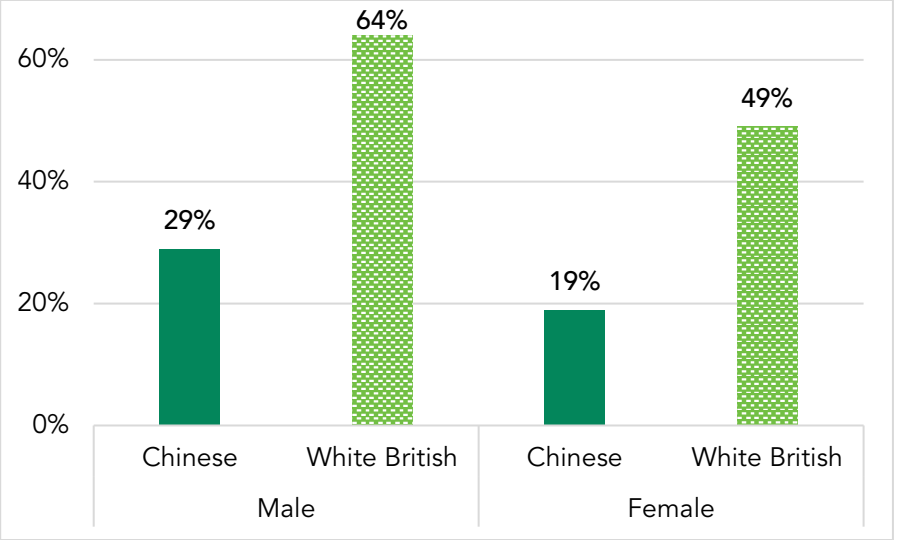
Table 23: Alcohol consumption by ethnic group: England, 2019

Ethnic Group	Drank alcohol in the last year (%)	Drinks alcohol at least once a week (%)
White Irish	89	67
White British	88	56
Other White background	84	50
Black Caribbean	78	52
Mixed or multiple ethnic backgrounds	74	40
Chinese	**73**	**24**
Indian	50	24
Black African	49	19
Any Other ethnic group	35	23
Bangladeshi	10	7
Pakistani	6	3

Source: NHS Digital, Health Survey for England (7)

Alcohol consumption in England was higher amongst men in both the Chinese and White British populations. 29% of Chinese men typically drank alcohol at least once per week, compared with 64% of White British men. Whereas, 19% of Chinese women and 49% of White British women typically drank alcohol at least once per week, as seen in **Figure 22** (see **Appendix 5.20** for data table).(7)

Figure 22: Alcohol consumption at least once per week by ethnic group and sex: England, 2011 to 2019



Source: NHS Digital, Health Survey for England 2011 to 2019.(7)

The Chinese population was also less likely to drink regularly and to excess than the White British population. UK Chief Medical Officers (CMOs) advise that adults should not regularly drink more than 14 units of alcohol per week to ensure the risk from alcohol is kept low.(98) Only 10% of the Chinese community reported drinking more than 14 units regularly, compared with 27% of the White British population.(7)

Additionally, most minority ethnic groups were less likely than the general population to report drinking on three or more days per week, especially women. 10% of Chinese men and 7% of Chinese

women drank on three or more days a week on average, compared with 35% of White British men and 21% of White British women.(7)

2.2.2.2 Alcohol Related Hospital Admissions

The Public Health England (PHE) Equity Report identifies alcohol-related hospital admissions as a measure of alcohol misuse, with significant personal and societal costs. From 2014 to 2015, there were almost 65,000 alcohol-specific admissions among men and nearly 40,000 among women. Chinese men account for less than 0.1% and Chinese women account for 0.1% of these admissions. In the same report, Chinese men and women accounted for 0.2% and 0.3% respectively for all hospital admissions. Disproportionate admissions for alcohol can be seen where the percentage for alcohol admissions is higher than the percentage for all admissions. Therefore, this report demonstrated the relative low risk of alcohol misuse within the Chinese community.(99)

Birmingham typically has higher levels of alcohol misuse than the England average. From 2018 to 2019 there were 2,370 alcohol admissions per 100,000 population. In Birmingham during the same time period there were 2,950 admissions per 100,000 population.(100) It is unclear how higher local alcohol admissions affects alcohol consumption and misuse by the Chinese population in Birmingham.

2.2.3 Drug Use

There is minimal data available on drug use within UK Chinese population in the last 10 years. Most recent estimates provide drug use by headline ethnic groups. From 2013 to 2014, it was reported that 3.5% of those from the Asian ethnic group had used illicit drugs, compared with 8.9% of the White British population.(101) Some sources cite that the overall prevalence of reported drug use in the UK has remained relatively stable throughout the last decade, therefore older resources will be used to approximate drug use amongst the Chinese population.(102)

A 2010 UK Drug Policy Commission report revealed that drug use amongst the 'Chinese/Other' ethnic group was 5.7%. In comparison, drug use was 11% within the White ethnic groups and 3% within Asian ethnic groups. 8% of those from the 'Chinese/Other' ethnic group aged 16 to 59 had reported using any illicit drug in the last year (12% White ethnic groups).(103) The report also cited that drug use within the Chinese population may be underestimated, this is due to the stigma attached to drug use being extended to the family of the drug user which can lead to users hiding their drug use.(103)

2.2.4 Smoking

According to ONS data, in 2021, 13% of adults aged 18 or older in England were current smokers. Comparatively, only 6.7% of Chinese adults were current smokers in the same year, the lowest rate of all ethnic groups within this dataset.(104) HSE data from 2011 to 2019 provides a more detailed ethnic breakdown of smoking status. Chinese adults had some of the lowest smoking rates across all ethnic groups: 7% were current cigarette smokers. HSE data shows that smoking prevalence is lower in most ethnic minority groups than in the White ethnic groups (**Table 24**). Also, a lower percentage of the Chinese population in the UK has smoked E-cigarettes (8%) compared with the White British population (22%).(7)

Table 24: Cigarette smoking status of adults aged 16 and over by ethnic group: England, 2011 to 2019

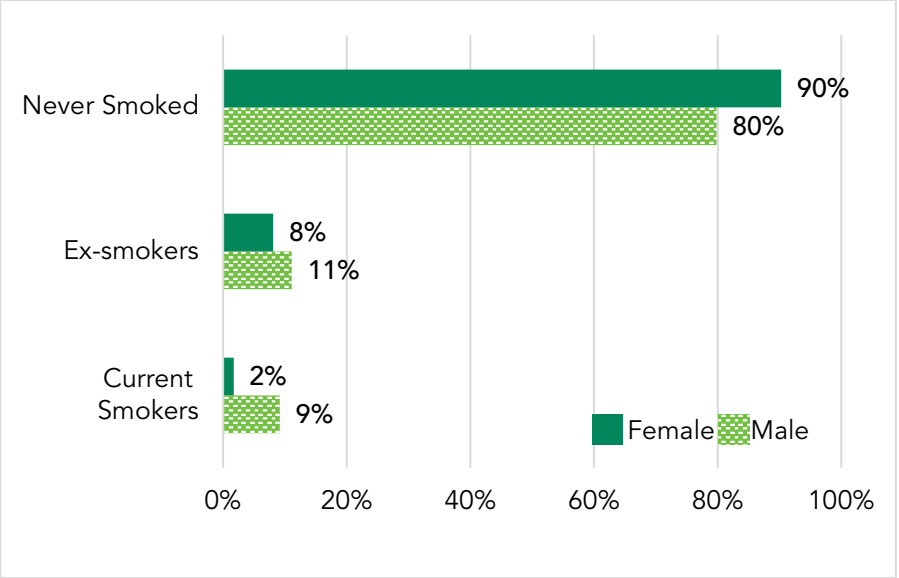
Ethnic Group	Current Smoker (%)	Used to Smoke (%)	Never Regularly Smoked (%)
Other White background	24	26	50
White British	19	27	54
Bangladeshi	16	12	72
Pakistani	14	9	77
Chinese	**7**	**11**	**82**
Indian	7	8	85
Black African	6	10	84

Source: NHS Digital. Health Survey for England.(7)

The percentage of people aged 18 years and over who smoked cigarettes in Birmingham (14%) in 2022 was slightly higher than across the UK (13%).(105) It is unclear how this affects smoking rates among the Chinese population in Birmingham.

The prevalence of cigarette smoking is typically higher in men across ethnic groups, including the Chinese ethnic group. A higher percentage of men from the Chinese ethnic group were current smokers (9.2%) in 2021 compared with Chinese women (1.7%) (**Figure 23**, see **Appendix 5.21** for data table).(106)

Figure 23: Smoking prevalence amongst the Chinese ethnic group by sex: England, 2021



Source: Office for National Statistics.(106)

Data from China also shows gender disparities in cigarette smoking, but the variance in prevalence is more sizable. A 2018 prospective study in China (n=512,891) reported that 68% of men (n=134,975) smoked regularly, compared with only 3% of women (n=7,811). Smoking prevalence in China is some of the highest across the globe, with Chinese men reported to consume approximately 40% of the world's cigarettes.(107) Within the UK, smoking prevalence is typically higher in the UK-born population across ethnic groups, except for Chinese males, Bangladeshi males and 'Other White' males and females.(108)

It is unclear what is the cause for the variation in smoking among Chinese men in China and the UK. However, one study cites acculturation, selection bias and socioeconomic status of Chinese migrants as potential explanations.(109) A 2014 study corroborated socioeconomic status as a factor for smoking prevalence. A "social class" gradient was observed among the Chinese population in the UK (n=1,900); those in more senior work positions had lower smoking prevalence.(108)

Published research from Glasgow in 2014 investigated any barriers faced by the Chinese community (n=15) when accessing smoking cessation services in the UK. Some of the main barriers identified included excessive or inflexible working hours, low confidence in smoking cessation services, language and cultural barriers, and services not culturally suitable for Chinese smokers.(110)

The study suggested that smoking cessation services should incorporate cultural values related to smoking and utilise community resources to reach the Chinese community effectively.(110)

2.2.5 Domestic Violence

Domestic abuse is defined in the UK by the Domestic Abuse Act 2021. The definition of domestic abuse is behaviour of a person ("A") towards another person ("B") if: (a) A and B are each aged 16 or over and are "personally connected" to each other, and (b) the behaviour is abusive.(111) Behaviour is "abusive" if it consists of any of the following:

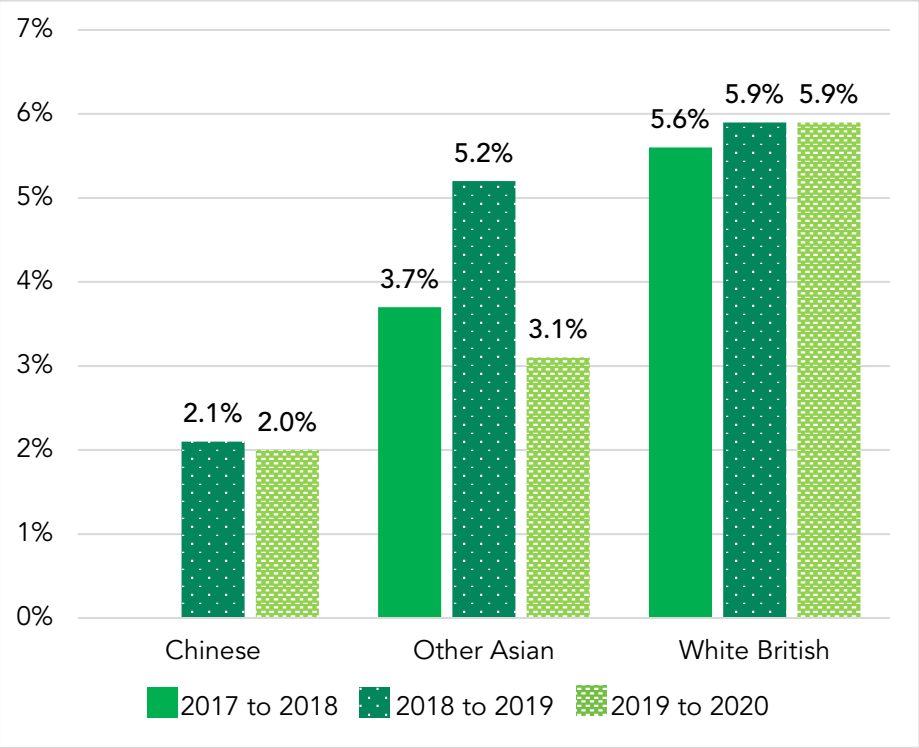
- Physical or sexual abuse
- Violent or threatening behaviour
- Controlling or coercive behaviour
- Economic abuse (acquiring, using, or maintaining money or other property, or obtaining goods or services)
- Psychological, emotional, or other abuse (111)

The Crime Survey for England and Wales stated that from 2019 to 2020, 5.5% of all people in the UK aged between 16 and 74 years old reported being a victim of domestic abuse in the previous 12 months. The Chinese ethnic groups report the second lowest percentage of domestic violence reported victims (2%) (**Figure 24**, see **Appendix 5.22** for data table).(112)

A higher proportion of Chinese women reported being victims of domestic violence (2.8%) compared with Chinese men (0.8%). This trend is mirrored throughout most other ethnic groups, except from Indian men and 'Other' ethnic group men.(112)

Figure 24: Percentage of 16 to 74-year-olds who reported being victims of domestic abuse in the previous 12 months, by ethnicity: England and Wales, 2017 to 2020

Note: data for the Chinese ethnic group for 2017 to 2018 has been withheld to protect confidentiality



Source: Crime Survey for England and Wales (112)

2.3 Healthy and Affordable Food

Key Findings

- From 2021 to 2022, 33% of Chinese adults in England were classified as overweight or obese (65% White British population).
- The average BMI for Chinese adults was cited as 24.2 for men and 22.9 for women in the HSE 2011 to 2019. A BMI of more than 25 kg/m^2 is classified as overweight.
- Research suggests classifying Chinese adults with a BMI of more than 23 kg/m^2 as overweight due to the increased risk of diabetes at lower BMIs than people from White ethnic groups.
- In the HSE 2011 to 2019, 65% of Chinese adults had a desirable waist circumference, (36% White British adults). A desirable waist circumference is defined as between 94cm and 102cm for men and between 80cm and 88cm for women.
- The average waist circumference was 85cm in Chinese men and 79cm in Chinese women in the HSE 2011 to 2019.
- There is limited data available on food insecurity within the Chinese population.

2.3.1 Diet and Nutrition

A healthy diet has a key function in preventing non-communicable diseases (NCDs); healthy diet means eating a wide variety of foods in the right proportions and consuming the right amount of food and drink to achieve and maintain a healthy body weight.(113) For this reason, understanding dietary patterns and preferences provide useful insight into the likely health outcomes and concerns within a community.(114) Examples of NCDs include mental health conditions, stroke, heart disease, cancer, diabetes, and chronic lung disease.(115)

There are various cuisines throughout the different regions of China involving unique cooking methods, traditional food and customs influenced by the scale of the land, the landscape, lifestyles, socioeconomic development, and food diversity. In modern day China there are said to be eight main cuisines: Chuan (Sichuan), Lu (Shandong), Yue (Cantonese or Guangdong), Anhui (Hui), Fujian, Hunan (Xiang), Jiangsu (Su), and Zhe (Zhejiang) cuisines.(116)

Although the cuisines vary, some of the most common ingredients used across Chinese cuisine includes rice, fish, a wide variety of meat, tofu, garlic, ginger, green onions and soy sauce.(116) Although not directly comparable, this may provide insight into the types of foods and cuisines which could be utilised when discussing health eating within the Chinese community in the UK.

2.3.1.1 Five-a-day

Data from HSE suggested that the Chinese ethnic group had the highest proportion of those eating at least five portions of fruit and vegetables per day (44%) (**Table 25**).(7)

Table 25: Age standardised daily fruit and vegetable consumption by ethnic group: England, 2011 to 2018

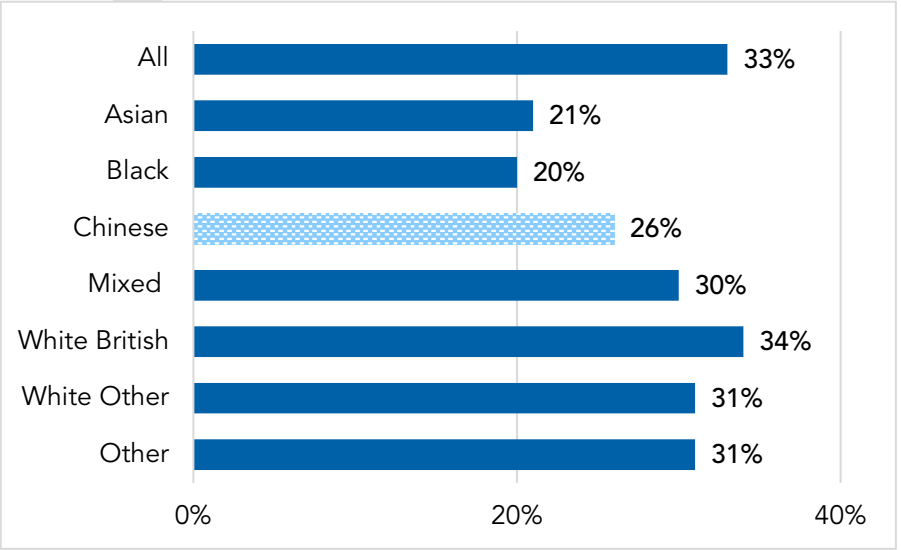
Ethnic Group	Mean daily portions of fruit and vegetables	Five or more portions consumed daily (%)
Chinese	**4.9**	**44**
Other White backgrounds	4.7	43
Indian	4.6	40
Any Other ethnic group	4.6	40
Pakistani	4.1	35
Mixed or multiple ethnic backgrounds	4.0	34
Black African	3.9	31
Bangladeshi	3.9	28
Black Caribbean	3.7	28
White Irish	3.5	24
White British	3.5	24

Source: NHS Digital. Health Survey for England.(7)

Almost half of Chinese women met the 5-a-day recommendation (49%), the highest of all ethnic groups, higher than the proportion of Chinese men who met the recommendations (38%). For most ethnic groups in the survey, women had higher consumption of fruit and vegetables than men.(7)

More recent data from the Active Lives Survey also shows the proportion of all adults consuming 5-a-day. From 2020 to 2021, 26% of the Chinese ethnic group were reported to meet the '5-a-day' guidelines, lower than for all ethnic groups (33%) and the White British ethnic group (34%) (**Figure 25**, see **Appendix 5.23** for data table).(117)

Figure 25: Percentage of adults aged 16 years and over who are eating '5-a-day', by ethnicity: England, 2019 to 2020



Source: Active Lives Survey (117)

The Active Lives Survey from 2021 to 2022 also reported adults meeting the 5 a day recommendations on a regional level; 24% of the Birmingham population met the recommendations.(65) It is unclear how local data on 5 a day consumption reflects dietary behaviours of the Chinese population in Birmingham.

2.3.1.2 Salt Intake

There is limited data on salt intake within the Chinese community. Data from the HSE 2004 shows that compared with the general population, the use of salt in cooking was much higher among ethnic minority groups. 82% of Chinese men and 75% of Chinese women added salt during cooking. This is higher than the general population, where 56% of men and 53% of women added salt in cooking (**Table 26**).(118)

Table 26: Use of salt in cooking by ethnic group and sex: England, 2004

Ethnic Group	Men (%)	Women (%)
Bangladeshi	95	91
Indian	93	92
Chinese	**82**	**75**
General Population	56	53

Source: NHS Digital. Health Survey for England.(118)

2.3.2 Obesity

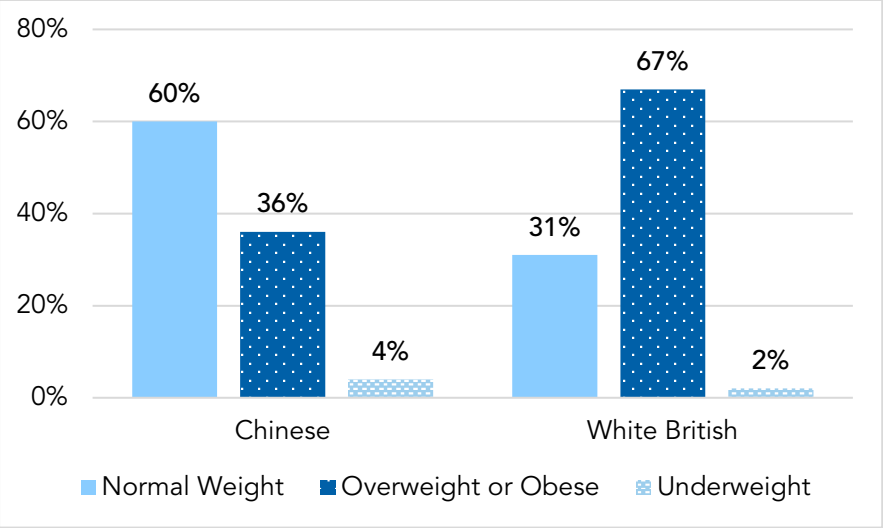
2.3.2.1 Body Mass Index

BMI is a measure that uses weight (kg) divided by squared height (m^2) to estimate an individual's weight status. A BMI of 25kg/m^2 or higher is considered overweight.(7) In England, from 2021 to 2022, 33% of the Chinese population aged 18 or older were classified as overweight or obese, compared with 65% of the White British population.(65)

Prevalence of adults who are overweight or obese in Birmingham is slightly higher than across England. From 2021 to 2022 it was reported that 66% of adults in Birmingham and 64% of adults in England were overweight or obese. It is unclear how regional differences in overweight and obesity levels differ for the Chinese population.(65)

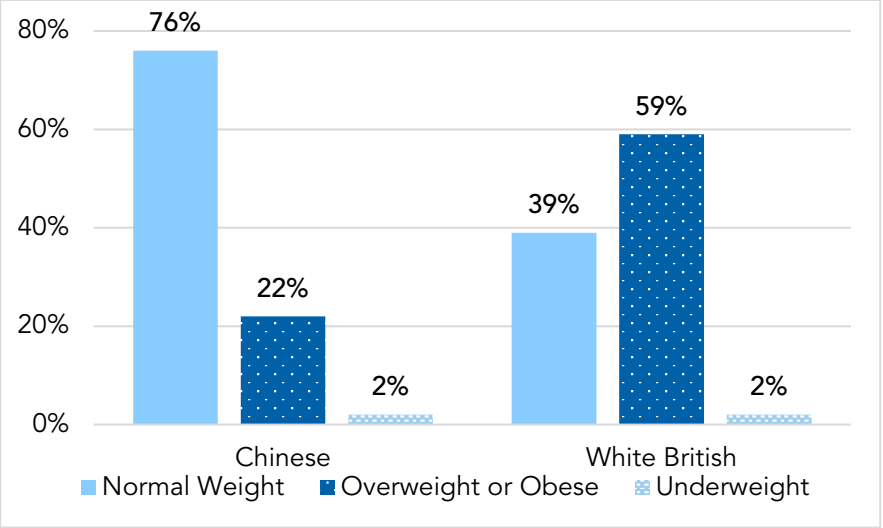
Men are typically more likely to be overweight or obese than women. In England, from 2011 to 2019, between 67% and 69% of men were overweight or obese compared with 59% of women. In the same period, 22% of Chinese women and 36% of Chinese men were classified as overweight or obese (**Figure 26** and **Figure 27**, see **Appendix 5.24** and **Appendix 5.25** for data tables).(7)

Figure 26: Weight category among men by ethnic group: England, 2011 to 2019



Source: NHS Digital. Health Survey for England (7)

Figure 27: Weight category among women by ethnic group: England, 2011 to 2019



Source: NHS Digital. Health Survey for England (7)

HSE also recorded the average BMI for each ethnic group. The mean BMI within the Chinese population was cited as 24.2 for men and 22.9 for women. This compares to 27.5 and 27.4 respectively for the White British population.(7) Published research from 2014 suggests that the BMI cut off point for the overweight category should be lower for the Chinese population (n=1,534) than the White population (n=471,174) due to a higher risk of diabetes at lower BMIs. Compared with White women with a BMI of 30 kg/m^2, diabetes prevalence was equivalent in Chinese women with a BMI of 24 kg/m^2. In men, the comparable BMI was 26 kg/m^2.(119) Recommendations from a World Health Organisation (WHO) Expert Consultation suggested that benchmarks for the overweight

category in Asian populations should be moved to BMIs greater than 23 kg/m^2 to reflect these risks.(120)

2.3.2.2 Waist Circumference

Waist circumference can be utilised as an indicator for several health conditions. Excess fat around the abdomen usually suggests that there is excess fat inside the organs, which can contribute to high blood pressure and diabetes.

The HSE reported that from 2011 to 2019, the mean waist circumference was 98cm for men and 89cm for women from the White British ethnic group. For the Chinese population, the mean waist circumference was 85cm and 79cm respectively (**Table 27**).(7)

Within the HSE a 'desirable waist circumference' was listed as less than 94cm for men and less than 80cm for women. A 'very high waist circumference; was listed as more than 102cm for men and more than 88cm for women.

Table 27: Age standardised waist circumference among adults aged 16 and over by ethnic group: England, 2011 to 2019

Waist Circumference	Chinese (%)	White British (%)
Desirable waist circumference	65	36
High waist circumference	25	22
Very high waist circumference	9	42

Source: NHS Digital. Health Survey for England.(7)

Typically, a high-risk waist circumference is defined as above 94cm in men and 80cm in women. However, desirable waist circumference differs between ethnic groups. The British Heart Foundation suggest that a waist circumference of 90cm or higher in Chinese men and 80cm or higher in Chinese women is considered 'very high risk'. No 'high risk' category was provided for the Chinese ethnic group.(121) This variance is due to evidence which demonstrates that Chinese populations have a higher percentage of body fat for a given waist circumference than western populations.(122)

2.3.3 Food Insecurity

The House of Commons Library defines household food insecurity as whether a household can acquire an adequate quality or sufficient quantity of food in socially acceptable ways. Food insecurity has been exacerbated by the Cost-of-Living Crisis. Between June to July 2022, of the 91% of adults who reported an increase in their cost of living, 95% reported that their food bill increased, while 44% reported reduced spending on essentials, including food.(123)

There is limited data on food insecurity in the UK by ethnic group; only headline ethnic group data is available. The Family Resource Survey reported that in the financial year 2019 to 2020, 92% of households self-reported being food secure. The survey uses the 'household reference person' (HRP) to make conclusions; this is either the highest income earner or eldest householder where income is equal. Food security is highest amongst households with a White HRP(93%) and lowest amongst Black/African/Caribbean/ Black British HRPs (81%). Food security was 92% among Asian/Asian British HRPs. The survey did not provide data on the Chinese population.(124)

2.4 Active at Every Age and Ability

Key Findings

- 51% of the Chinese population in the West Midlands from 2020 to 2021 were physically active (60% White British population).
- In 2020, Chinese adults in England with a disability or long-term health condition had lower physical activity levels (46%) when compared with Chinese adults with no disability or long-term condition (61%).
- Across England, 39% of Chinese adults completed two or more sessions of muscle strengthening activities per week compared (44% White British adults).
- The most common sports among Chinese adults in England in 2020 were: walking for travel (34%), 'fitness activities' (30%), walking for leisure (23%), running (20%).
- In 2020, the Chinese ethnic group in England had a high percentage of people who found physical activity enjoyable or satisfying (76%); 71% among the White British ethnic group.
- Between 6% and 6.6% of the Chinese population have a long-term musculoskeletal condition (between 11% and 17% of the England general population).
- In the 2022 GP Patient Survey, Chinese adults reported less problems with mobility (5%, n=299) than the England average (13%, n=89,915).

2.4.1 Physical Activity

2.4.1.1 Physical Activity Rates

UK CMOs physical activity guidelines suggest that adults should complete a minimum of 150 minutes of physical activity per week at moderate intensity or 75 minutes of physical activity per week at vigorous intensity. Moderate activity is anything that raises the heart rate, such as brisk walking or cycling. Vigorous activity is high intensity exercise, such as running.(125)

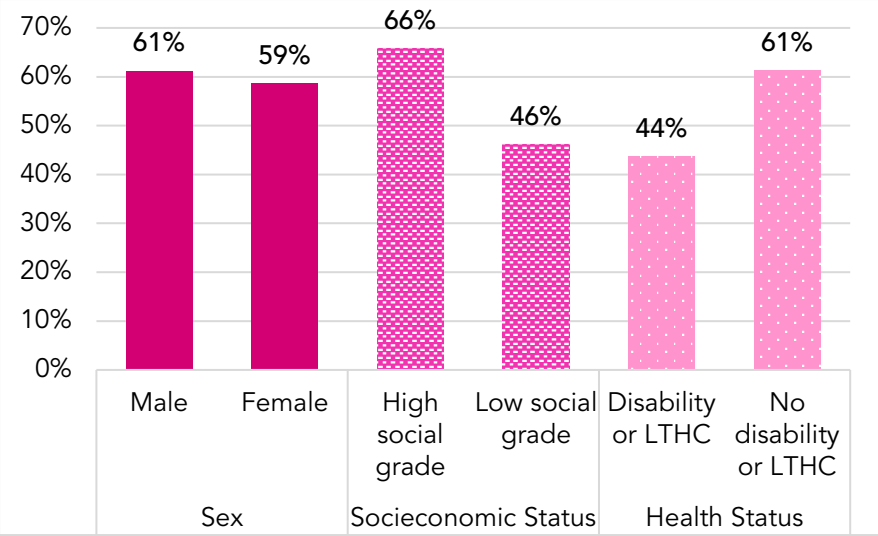
The Active Lives Survey 2020 to 2021 measured activity levels in England and provided analysis by ethnic group. Overall, the report noted that 61% of the general population was physically active (150+ minutes per week), and an additional 12% were fairly active (between 30 and 149 minutes per week).(126)

The Chinese population had lower levels of physical activity than the general population and the White British population: 58% of the Chinese population were classified as active and 13% were fairly active, compared with 63% and 11% respectively for the White British population.(9) More recent levels of physical activity are also available via the Office for Health Improvement & Disparities (OHID) Fingertips tool. Fingertips, using data from the Active Lives Survey, identified that from 2021 to 2022 physical activity rates were slightly higher across ethnic groups: 62% of Chinese adults in England were recorded as physically active, compared with 69% of the White British population.(65)

The Active Lives Survey also provides data on ethnicity by region: 51% of the Chinese population in the West Midlands from 2020 to 2021 were physically active, compared with 60% of the White British population. Activity was lower amongst most ethnic groups on a regional level compared with the national average.(9)

There are some disparities in the physical activity rates within the Chinese population, when accounting for additional demographic factors such as sex, socioeconomic status, and long-term health condition (LTHC) or disability. Chinese adults with a disability or LTHC had lower physical activity levels (46%), as shown in **Figure 28**, see **Appendix 5.26** for data table.(127)

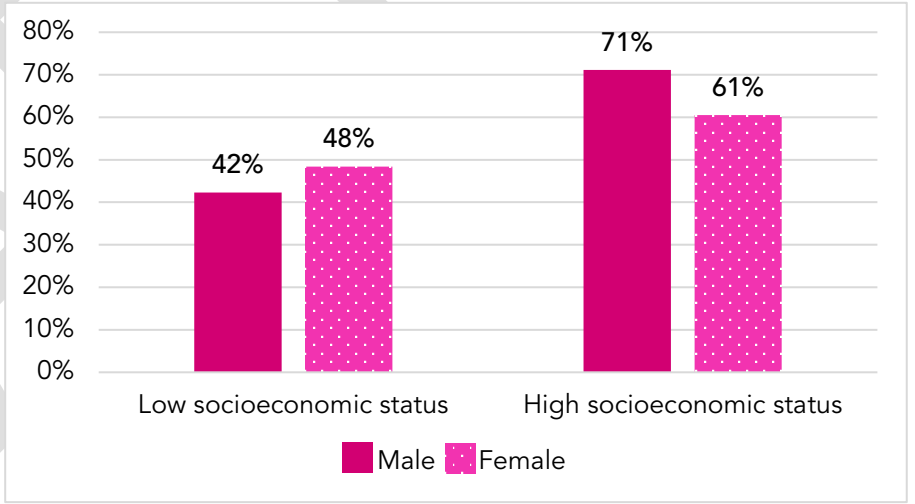
Figure 28: Physical activity among Chinese population by sex, socioeconomic status, and disability or LTHC: England, 2020



Source: Sport England. Active Lives Survey (127)

These disparities in physical activity rates become more apparent when subgroups are analysed. Chinese men of a low socioeconomic group had lower physical activity rates (42%) than Chinese men of a high socioeconomic group (71%), demonstrated in **Figure 29** (see **Appendix 5.27** for data table).(127)

Figure 29: Proportion of the Chinese population who are physically active by sex and socioeconomic status: England, 2020



Source: Sport England. Active Lives Survey (127)

The CMOs also provide guidance on muscle strengthening activities. Adults are recommended to complete activities which "focus on improving or maintaining muscle strength, balance and flexibility" twice per week.(125) In England, in 2020, 39% of Chinese adults took part in two or more sessions of muscle strengthening activities per week compared with 44% of White British adults.(9)

2.4.1.2 Physical Inactivity Rates

Physical inactive and sedentary behaviours involve an individual participating in little movement or activity and spending periods of time in a sitting, reclining, or in a lying posture during waking hours. Adults who are physically inactive and spend large periods of time sedentary are at an increased risk of all-cause and cardiovascular mortality and increased cancer risk. Similar effects are seen in children.(125)

Data is available on rates of physical inactivity (less than 30 minutes per week) from the Active Lives Survey. In 2020, 29% of the Chinese population were physically inactive, compared with 26% of the White British population. Within the inactive populations, the Chinese community had lower participation in any type of physical activity in the past 28 days compared with the White British population, as seen in **Table 28**.(9)

Table 28: Physical activity participation amongst those who are not physically active by ethnic group: England, 2020

Activity in the last 28 days	Chinese (%)	White British (%)
No activity	65	59
Light intensity only	30	36

Source: Sport England. Active Lives Survey.(9)

Data on inactivity is also available on a regional level. In the West Midlands from 2020 to 2021, 40% of Chinese adults were inactive, compared with 28% of the White British population.(9)

More recent data from 2021 to 2022 shows a slight decrease in physical inactivity rates; 25% for both Chinese and White British populations.(9) Physical activity and inactivity rates in 2020 may have been affected by the COVID-19 pandemic.

2.4.1.3 Participation in Sports

China has a wide variety of traditional sports, including various martial arts (Wushu), weiqi (Go) and xiangqi (Chinese chess).(128) However, in modern day China and the UK Chinese community, some of the most popular sports are running, badminton and table tennis.(129)

Evidence from the Active Lives Survey provides insight into the participation in sports and activity. The dataset shows participation rates within ethnic groups as a percentage of the group engaging in the activity. The most common activities among the Chinese ethnic group in England included: walking for travel (34%), 'fitness activities' (30%), walking for leisure (23%) and running (20%). Additionally, the survey shows whether a particular group is more or less likely to be participating than the national average. Chinese adults were more likely to be over-represented in badminton, table tennis, generic fitness training, combat sports/martial arts, and running relative to their share of population (0.8%); see **Table 29**.(127)

*A value above the percentage share of population indicates that a community is **more likely** to be participating than the national average.*

Table 29: Levels of participation in different sports & activities in Chinese adults: England, 2020

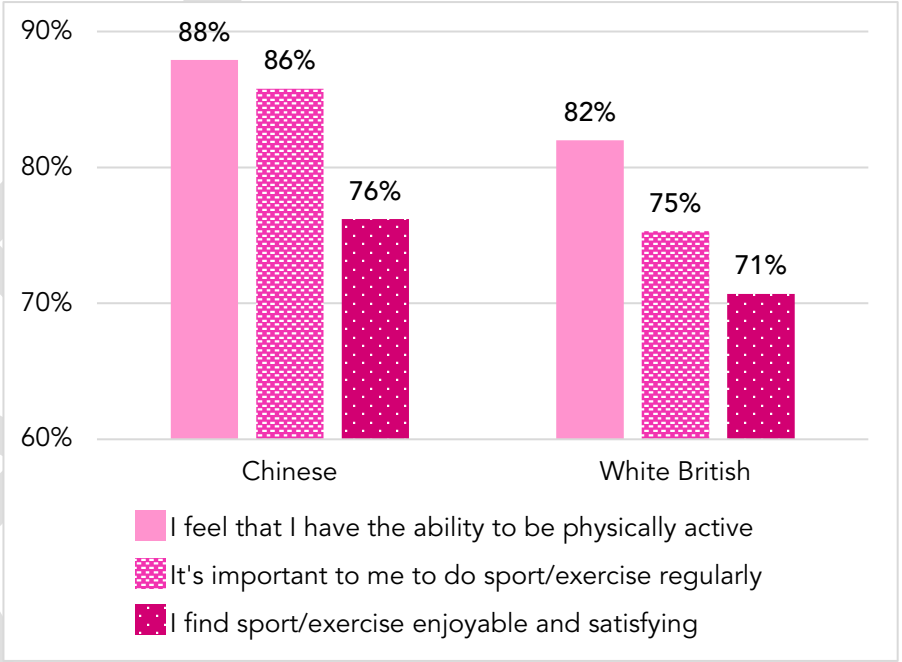
Sport	Chinese population engaged with activity (%)	Share of population (%)
Badminton	7.9	3.2
Table Tennis	2.6	2.1
Generic Fitness Training	6.0	1.1
Combat Sports/Martial Arts	2.7	1.1
Running	20	1.0

Source: Sport England. Active Lives Survey (127)

2.4.1.4 Barriers and Facilitators to Physical Activity

Although a lower percentage of the Chinese population are physically active than the White British population, a higher percentage of the population said that they associate positive emotions with sport and exercise. The Active Lives Adult Survey 2020 to 2021 reported perceptions on physical activity by ethnicity utilising the following phrases "I find sport/exercise enjoyable and satisfying", "It's important to me to do sport/exercise regularly" and "I feel that I have the ability to be physically active". The findings to these responses are summarised in **Figure 30** (see **Appendix 5.28** for data table).(9)

Figure 30: Perceptions regarding physical activity by ethnic group and 'Agree or Strongly agree' response categories: England, 2020



Source: Sport England. Active Lives Survey (9)

There is very limited published research investigating the barriers to physical activity among Chinese adults, however, one 2020 systematic review reported the facilitators and barriers for Chinese children in non-Chinese territories, which may provide some insight. The review looked at studies from the UK, Australia, and the United States. Typically, the facilitators stated in the review mirrored that of the Active Lives Survey, such as a willingness to participate in physical activity especially team sports when a supportive social and

parental network is present. Additionally, physical activity was viewed as an important part of childhood development. Some of the identified barriers included experiences of exclusion and overt racism from peers and cultural preferences of an emphasis from parents for academic achievement.(130)

2.4.2 Mobility

Mobility can be impacted by various musculoskeletal (MSK) conditions that affect the joints, bones, muscles, and spine. Those with MSK conditions may experience pain, joint stiffness and limited mobility when participating in physical activity.(131)

Prevalence of long-term MSK conditions is available from a 2021 report by Versus Arthritis and OHID Fingertips. Between 11% and 17% of the England population reported a long-lasting MSK. The Chinese population had the lowest reported prevalence of MSK (between 6.0% and 6.6%) when compared with all ethnic groups, including the White British population (between 19% and 21%).(65, 131)

Published research from 2014 using UK Biobank data further adds to these findings. The report (n=498,071) assessed whether individuals had experienced localised or generalised pain which interfered with usual activity in the last month. The Chinese population (n=1,494) reported experiencing pain (61%) to similar levels than in the White participants (60%) but reported less chronic pain lasting more than three months (37% vs 43% respectively).(132)

The 2022 GPPS also assessed mobility more generally via the following question "over the last 12 months have you experienced problems with your physical mobility, for example, difficulty getting about your home?": 5% (n=299) of the Chinese sample (n=6,487) reported experiencing issues compared with 13% (n= 89,915) of the general population.(11) Overall, research indicates that the Chinese community experiences less issues with mobility than the general population.

2.5 Living, Working and Learning Well

Key Findings

Education and Qualifications

- The percentage of Chinese young people aged 16 to 24 not in education, employment, or training (4.5%) from 2017 to 2019 was lower than the UK average (12%).
- In 2021, 72% of pupils from the Chinese ethnic group secured a higher education place in the UK; White ethnic group (33%).
- In the 2021 to 2022 academic year, 124,370 students from China attended higher education institutes in England.
- According to the 2021 census, 55% of Chinese adults in Birmingham had a level 4 or above qualification (30% Birmingham average).

Employment and Economic Activity

- In 2021, 50% of the Chinese ethnic group in Birmingham were economically active, compared with 56% of the Birmingham average.
- In 2021, 30% of Chinese women and 29% of Chinese men in Birmingham were economically inactive students (10% Birmingham average for all ethnic groups).
- Detailed breakdown of occupation showed that 'food preparation and hospitality trades' (9%) was the most common occupation for Chinese people in Birmingham.

Deprivation and Housing

- 24% of the Chinese population in Birmingham in 2019 lived in the 10% most deprived MSOAs nationally (34% White British population).
- In 2019, 17% of the Chinese population in England lived in the 10% most deprived neighbourhoods by 'living environment' (10% England average).
- Families from the Chinese ethnic group (25%) were the least likely to receive any state support. 51% of families nationally receive state support.
- Families from the Chinese ethnic group in England had the lowest percentage of households receiving state support (25%). 51% of all households claimed any state support from 2019 to 2021
- In the 2021 census, the Chinese ethnic group had a higher percentage of people living privately or rent free (35%) than the Birmingham average (23%).

Physical Health

- In the 2021 census, 88% of the Chinese population rated their health as "good or very good" (77% Birmingham average).
- A 2017 study suggested diabetes was more common among Chinese men (7.1%) and women (5.5%) than the general population (6.0% and 3.6% respectively).

- 6% of the Chinese population in Birmingham reported a self-reporting limiting disability in the 2021 census (20% Birmingham average).
- Research indicates high levels of myopia (short-sightedness) in Chinese men (51%) and women (45%); 27% in White British sample.
- In the 2022 GP Patient Survey, the Chinese ethnic group (26%) less frequently rated their experience with a GP as "very good" than the general population (38%).
- 49% of Chinese patients "definitely" had trust in their healthcare professional at their last GP appointment (62% England average).
- There is reporting of the Chinese community underutilising health and social care services. Some of the barriers to access included: unaware of services, language barriers, lack of support accessing services.

2.5.1 Education, Qualifications, Skills, and Training

2.5.1.1 Not in Employment, Education or Training

Education and employment status has been shown to be a marker for future health outcomes. For example, not being in employment has been linked to poorer health status, due to factors such as lower wages and/or lower quality of employment later in life.(133)

Across England, the rates of those Not in Employment, Education or Training (NEET) for 16- to 17-year-olds was 4.7% in 2021. Rates vary by ethnicity; the Chinese ethnic group had the lowest percentage of young people NEET at 1.5% whereas the White ethnic group had a NEET rate of 5.0% for this age range. Data is not available by ethnic group on a regional level; however, Birmingham has higher rates of NEET for 16- to 17-year-olds (6.6%) overall than in England. It is unclear how this affects the NEET rates for the Chinese community in Birmingham.(65)

The number of young people NEET increases when analysing the 16 to 24 age group. Data from the APS shows that in the 3 years from 2017 to 2019, an average of 12% of young people aged 16 to 24 in the UK were NEET. Again, it was found that a lower percentage of young people in the Chinese ethnic group (4.5%) were NEET compared with the UK average and those of White ethnicity (12%). There are gendered differences observed in rates of NEET, with men typically having lower rates across ethnic groups. Within the Chinese ethnic group, 3.6% of men were NEET compared with 5.2% of women (11% and 12% UK average).(134)

2.5.1.2 Higher and Further Education

During 2017 and 2018, following study during ages 16 to 18, 81% of students in England went into education, employment, or apprenticeships. Chinese (87%) and Indian (88%) students had the highest percentage of students going into sustained education, employment or apprenticeships; compared with 82% of students from the White ethnic group.(135)

In 2021, 72% of pupils from the Chinese ethnic group secured a higher education place in the UK; in comparison to the wider Asian ethnic group (55%) and the White ethnic group (33%). Pupils from the Chinese ethnic group have consistently had the highest entry rate throughout the reported timeframe from 2006 to 2021.(136)

Additionally, there is also a substantial number of international students from China choosing to study at highest education institutes in the UK. Published research has found that Chinese students viewed UK education as a way of 'becoming an adult'; other motivators included personal growth, employability and life experience.(137, 138).

The latest data from Higher Education Statistics Agency (HESA), the UK-based body which collects education-related data, has found that there were 124,370 students from mainland China in higher education institutions in England in the academic year 2021 to 2022. Additionally, data from Special Administrative Regions of China is also included; in 2021 to 2022 there were 15,805 students from Hong Kong and 490 from Macao. Of the 140,665 Chinese people who enrolled in universities in England, 14,285 (10%) did so in universities in the West Midlands.(139)

Table 30 below provides a breakdown of the students enrolled in the academic year 2021 to 2022 in Birmingham based higher education providers.(140)

Table 30: Higher education students by higher education provider and place of domicile, Birmingham: 2021 to 2022

Caution must be applied to these statistics as figures were rounded to the nearest 5.

Higher Education Provider	China	Hong Kong (Special Administrative Region of China)
Aston University	260	40
Birmingham City University	580	30
The University of Birmingham	4,805	430
University College Birmingham	105	40

Source: Higher Education Statistics Agency (2023) (140)

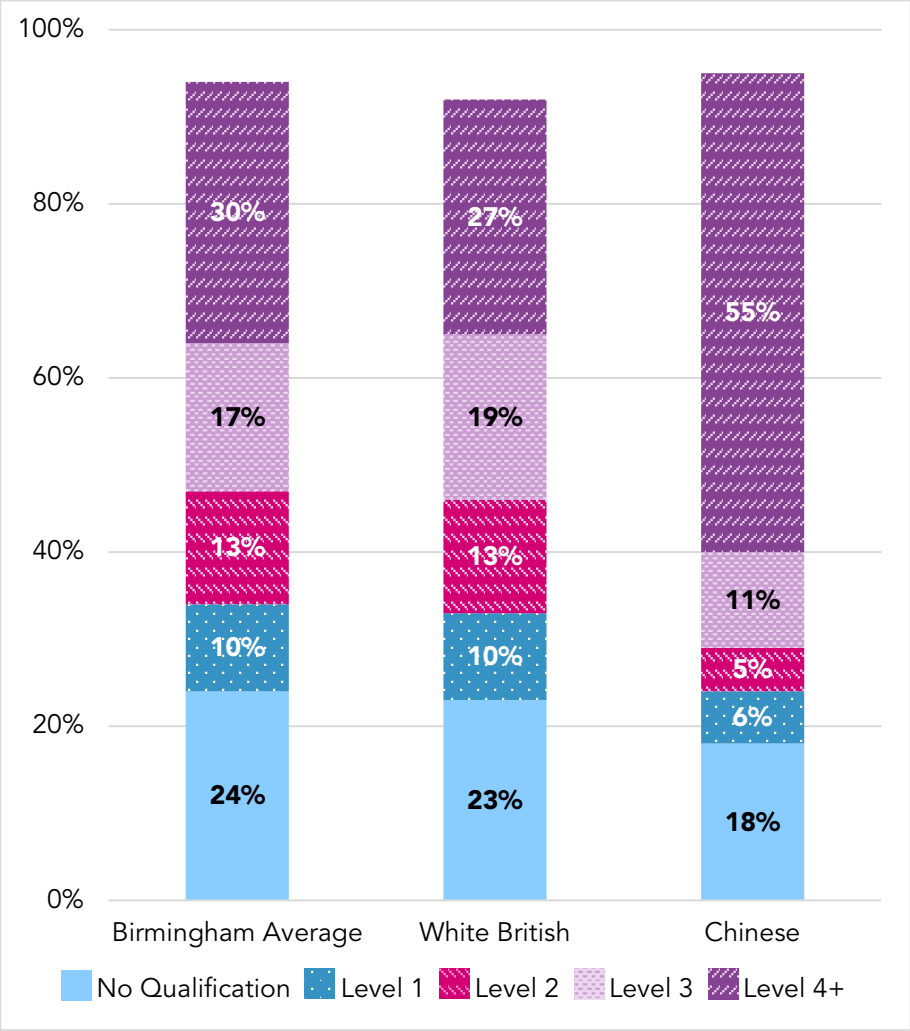
2.5.1.3 Highest Level of Qualification

The 2021 census reported on the highest level of qualification obtained by ethnic group. People who identified as Chinese or Indian had the highest levels of education of the 19 ethnic groups analysed. Around 30% of people aged 16 years or over in Birmingham had obtained a higher-level qualification (level 4 or above). This equates to a university degree, higher level BTEC or equivalent. This increased to 55% for the Chinese ethnic group (**Figure 31**, see **Appendix 5.29** for data table). Additionally, 6% of the Chinese population had obtained an apprenticeship or other

form of qualification as their highest level of education. This was the same as the Birmingham average.(141)

The highest level of qualifications obtained in Birmingham is typically lower across all ethnic groups. Nationally, around 34% of the population had a level 4 or above qualification, including 56% of the Chinese community.(141)

Figure 31: Highest level of qualification by ethnic group: Birmingham, 2021



Source: Office for National Statistics, census 2021 (141)

2.5.2 Employment and Economic Activity

2.5.2.1 Employment

Data on employment and unemployment rates by ethnic group are available from the Labour Force Survey (LFS) and the 2021 census. The data from the 2021 census typically shows higher rates of unemployment, as the census was conducted during the coronavirus pandemic it is assumed that some furloughed people likely reported that they were out of work rather than in employment when completing the census. Additionally, there were differences in methods for data collection which led to different estimates.(142)

Both sources typically showed lower rates of employment and higher rates of unemployment in the Chinese ethnic groups when compared with the national average and the White or White British ethnic group.

The LFS reported that from January to December 2022, the average employment rate for all persons was 76%. For the same period employment rates were reported as 65% for the Chinese ethnic group and 77% for the White ethnic group. The Chinese ethnic group reported some of the lowest employment rates across ethnic groups, lower rates only reported in the Pakistani (60%) and Bangladeshi (61%) ethnic groups. Furthermore, gendered differences in employment rates were observed. During this period, 68% of Chinese men and 62% of Chinese women were in employment (79% and 72% nationally).(143) The 2021 census showed similar trends, with employment rates of 71% in England and Wales, 56% within the Chinese ethnic group and 73% in the White British ethnic group.(141)

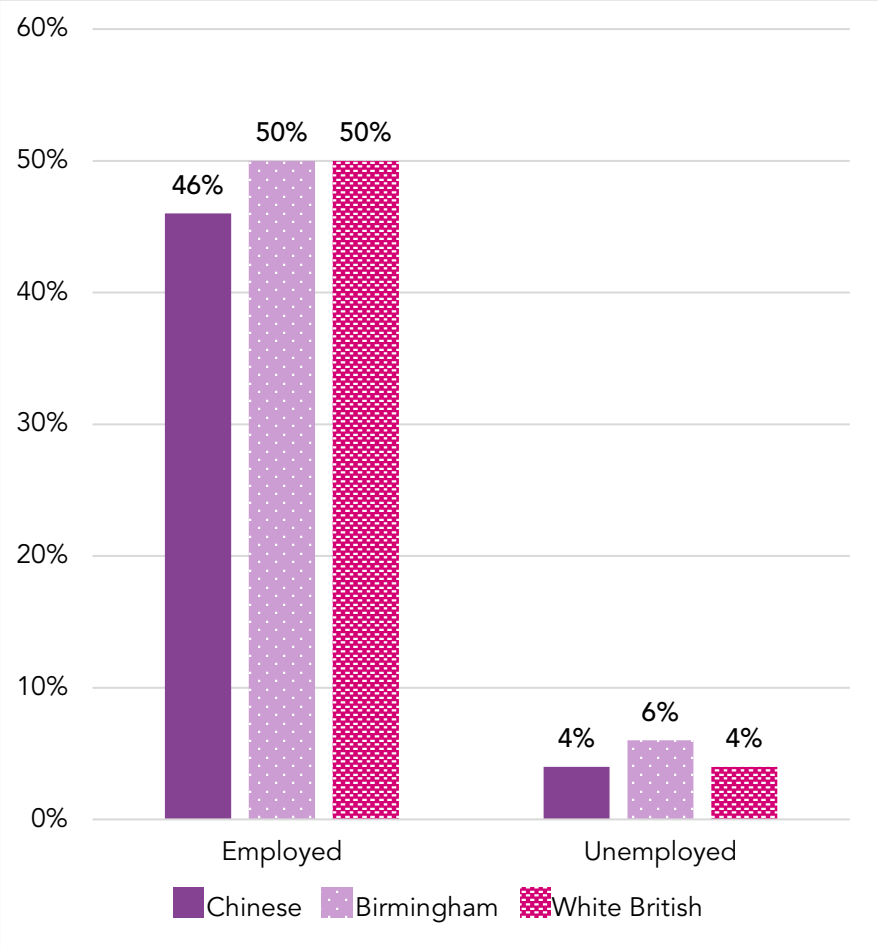
According to data from the LFS, the Chinese ethnic group had the highest unemployment rates. From January to December 2022, an average of 9% of the Chinese ethnic group were unemployed, compared with 4% of the average UK population. Chinese men had high rates of unemployment, reported at 11% in the LFS, compared with 7% of Chinese women (4% for men and women nationally).(143) The 2021 census does not report these differences, and cites 4% unemployment for the Chinese, White British and England and Wales populations.(141)

2.5.2.2 Economically Active

The 2021 census provides further insight into economic activity by ethnic group. A population, aged 16 and over, is defined as economically active if they are in employment or are unemployed and looking for work or available to start work within the next two weeks. 50% of the Chinese ethnic group were reported as being economically active, compared with 56% of the average Birmingham population (**Figure 32**, see **Appendix 5.30** for data table). Economic activity was higher in England and Wales across ethnic groups (75%); 60% of the Chinese ethnic group were economically active.(141)

Similar to employment, the LFS reported higher rates of economic activity across ethnic groups. From January to December 2022, 71% of the Chinese ethnic group was classified as economically active, on average. Rates of economic activity were reported as 80% for the White ethnic group and 79% for the UK total population.(143)

Figure 32: Economic activity by ethnic group: Birmingham, 2021



Source: Office for National Statistics, census 2021 (141)

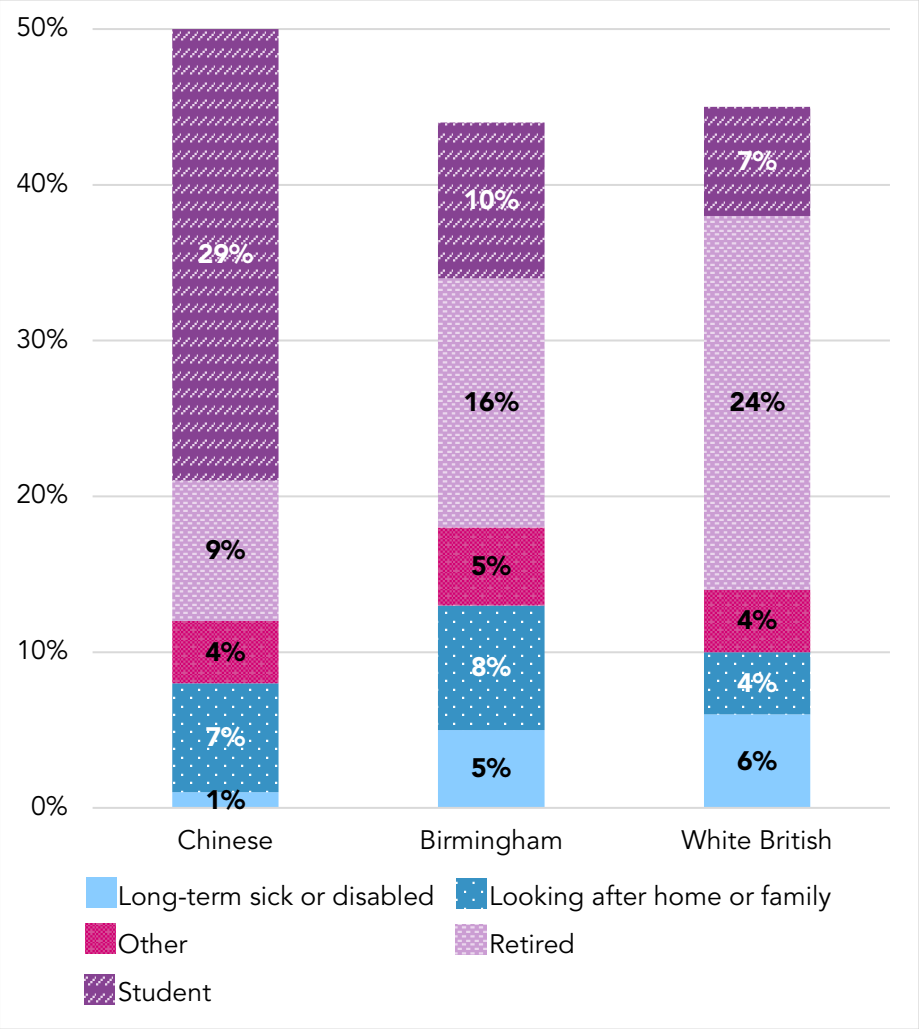
2.5.2.3 Economically Inactive

An economically inactive population is defined in the LFS as "people aged 16 and over without a job who have not sought work in the last four weeks and/or are not available to start work in the next two weeks". Typically, the main economically inactive groups are students, people looking after family and home, those who are sick and disabled (both long-term and temporary) and retired people.(144)

The LFS provides an overview into the rates of economic inactivity by ethnic group. Between January and December 2022, 22% of the UK population were economically inactive. Economic activity among the Chinese ethnic group was reported at 30%. However, the LFS does not break down the categories of economic inactivity, such as retired or student, by ethnic group.(143)

The 2021 census provides a more detailed breakdown on economic inactivity. Overall rates of inactivity reported for the Chinese ethnic group was 50%, compared with 45% for the White British ethnic group and 44% Birmingham average. The Chinese population had a higher proportion of economically inactive students (29%) when compared with the White British (7%) and Birmingham (10%) populations (**Figure 33**, see **Appendix 5.31** for data table). Birmingham had a higher percentage of economically inactive students across ethnic groups than England and Wales (6%).(141)

Figure 33: Economic inactivity by ethnic group: Birmingham, 2021



Source: Office for National Statistics, census 2021 (141)

Note: "does not apply" was removed from this dataset as it may have included groups that could not be economically active (e.g., children).

The percentage of economically inactive students in the Chinese population is reflective of the sizable number of Chinese students and international students from China in higher education in the UK (***see section 2.5.1.2***). In the 2021 census, 55% of the Chinese population nationally aged 20 to 29 were economically inactive students (9% White British, 10% England and Wales).(141)

2.5.2.4 Occupation

The 2021 census provides a breakdown of occupation by ethnic group and sex in Birmingham. The Chinese ethnic group had a higher percentage of its population working as 'managers, directors, and senior officials' (16%) compared with 11% of the White British ethnic group, and 10% in the Birmingham average population. Additionally, 32% of the Chinese ethnic group were in 'professional occupations' in comparison to 21% of the White British ethnic group and 21% of the Birmingham average population (**Table 31** below).(141) These trends are reflected nationally. 15% of the Chinese ethnic group in England and Wales were 'managers, directors and senior officials' and 34% were in 'professional occupations'.(141)

Furthermore, gendered differences in occupations occur across ethnic groups. Men were more commonly in 'managers, directors, and senior officials' occupations in the Chinese ethnic group (18%) compared with Chinese women (14%). This is also true for the White British ethnic group (13% men vs 8% women). The largest

occupation category for Chinese men and women in Birmingham was 'professional occupations' (34% and 31% respectively). (141)

Professional occupations encompass a variety of roles including teaching and other educational professionals, information technology professionals and nursing and midwifery professionals.

Table 31: Occupation by ethnic group: Birmingham, 2021

Occupation	Chinese (%)	White British (%)	Birmingham (%)
Managers, directors, and senior officials	16	11	10
Professional occupations	32	21	21
Associate professionals and technical occupations	12	13	11
Administrative and secretarial occupations	9	10	9
Skilled trades occupations	11	10	8
Caring, leisure and other service occupations	3	10	10
Sales and customer service occupations	7	8	8
Process, plant, and machine operatives	2	7	9
Elementary	8	11	14

Source: Office for National Statistics, census 2021 (141)

Additionally, the census provided detailed breakdowns of specific occupation by ethnic group in Birmingham. Among the Chinese population, the most common occupations included: food preparation and hospitality trades (9%), teaching and other educational professionals (5%), sales assistants and retail cashiers (5%), medical practitioners (5%), and finance professionals (4%).(141)

This differs from the most common occupations across Birmingham, which include: caring personal services (6%), sales assistants and retail cashiers (5%), road transport drivers (5%), teaching and other educational professionals (4%) and elementary storage occupations (3%). (141)

Data from the Family Resources Survey showed that on average from 2018 to 2021 the Chinese ethnic group were more often employed in higher paid occupations than the general population. 11% of Chinese households had a total gross weekly household income of £2,000 or more, compared with 6% of the UK and the White ethnic group. Data is not available by ethnic group on a regional level, however households in Birmingham were less likely to be in the top income bracket (5%) than the UK average (6%). It is unclear how this affects the average income for the Chinese community in Birmingham.(124)

Published research analysing occupations within the NHS mirror the findings of the 2021 census. In 2017, it was reported that the Chinese ethnic group had a higher percentage that were employed as doctors within the NHS in England (43%) compared with all other ethnic groups, including the White ethnic group (6.8%). However, White doctors were found to be in the highest paid positions more

frequently than the Chinese doctors: 46% of White doctors were employed as consultants, compared with 33% of Chinese doctors. The study also found that across ethnic groups, men were more likely to be in the top paid positions, such as consultants.(145)

2.5.2.5 Barriers to Employment

Although data on pay inequality between ethnic groups is not readily available, research by Mok and Platt investigated pay outcomes among Chinese subpopulations who were working in hotel and restaurant industries by pooling data from 38 waves of the LFS from 2008 to 2017. The study identified 5 Chinese subpopulations, categorised by place of birth, and included those born in mainland China (n=741), Hong Kong and Macau-born Chinese (n=488), UK born Chinese (n=379), Taiwanese, Malaysian and Singaporean Chinese (TMS) (n=389), Sino-Vietnamese, other South East Asian and Islander Chinese (n=150). Differences in predicted pay per hour were found among the subpopulations: mainland Chinese populations on average had a pay of 21% less per hour than White British counterparts working in the same industries. This rate was 24% less for Hong Kong Chinese and 12% less for British born Chinese.(146)

Finally, occupation among the Chinese population is not consistent across age groups. Older Chinese migrants in the UK typically face additional barriers to employment due to a large proportion of this group working in precarious careers and self-employment previously which decreases success when applying to more senior positions with employers looking for workers with formal qualifications and trackable career histories. Additionally, among the older Chinese population, English proficiency is typically lower than in young Chinese people, which creates additional language barriers when accessing sustainable work, including occupations where English skills are not a priority.(147)

2.5.3 Deprivation

2.5.3.1 Index of Multiple Deprivation

The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England and is calculated using outputs from the Indices of Deprivation (IoD) domains. There are seven distinct domains of deprivation, including income, employment, crime, barriers to housing and services and living environment. An IMD decile output of 1 demonstrates a neighbourhood which is in the 10% most deprived in the country.(16)

In Birmingham, the Chinese population is less likely to live in the most deprived areas compared with the average citizen: 24% of the Chinese population in Birmingham live in the 10% most deprived MSOAs nationally, compared with 34% of the White British population. Additionally, 3.2% of the Birmingham Chinese population live in the top 10 deprived MSOAs in the city, compared with 5.4% of the White British population. There was variation in the experiences of deprivation based on MSOA within the Chinese population, as seen in **Table 32**.(16)

Table 32: Deprivation among the Chinese population by MSOA: Birmingham, 2019

MSOA	Total Population	Chinese Population	IMD Rank	IMD Decile
Five Ways North	8,464	424	506	1
Digbeth	6,136	800	837	2
North Central & Dartmouth Circus	16,078	568	816	2
Attwood Green & Park Central	7,605	477	778	2
Ladywood – Summer Hill	7,895	238	1308	2
Metchley	7,434	347	1553	3
Selly Oak Park & Lodge Hill	6,741	250	2629	4
Central	6,139	455	2751	5
Selly Oak	15,999	956	3622	6
Edgbaston South & University	10,271	606	4180	7

Source: Ministry of Housing, Communities & Local Government (16)

Note: IMD Rank is comprised of all MSOAs nationally, with 1 being the most deprived neighbourhood nationally.

It is also important to note that while some MSOAs are more deprived than others, some people can live in the most deprived areas and not be deprived themselves, while some can experience deprivation despite living in the least deprived areas.

All populations in Birmingham are more likely to experience deprivation than the national average. However, the Chinese population at both regional and national scale are less likely to live in deprived areas than the general population. In England, in 2019, 8.4% of people from the Chinese ethnic group lived in the most deprived 10% of neighbourhoods, compared with 9% of the White British population and 10% of the general population.(10)

Data from the English IoD 2019 also provides an overview of the domains of deprivation experienced by ethnic group. The Chinese population experienced higher levels of deprivation in relation to health deprivation and disability, crime, barriers to housing and services, and living environment domains (**Table 33**).(10)

Table 33: Percentage of citizens living in the most deprived 10% of neighbourhoods, by type of deprivation and ethnicity: England, 2019

Indices of Deprivation Domain	Chinese (%)	White British (%)	England (%)
Health deprivation and disability	11	9.7	9.8
Crime	15	8.9	10
Barriers to housing and services	14	8.2	11
Living environment	17	9.2	10

Source: Ministry of Housing, Communities & Local Government (10)

The Chinese ethnic group experienced some of the highest levels of deprivation by living environment; a measure of the quality of both the 'indoor' and 'outdoor' local environment, including factors such as air pollution: 17% of the Chinese population nationally lived in the 10% most deprived neighbourhoods by living environment. This domain is only higher among the Pakistani (28%) and Arab (17%) populations.(10) The Chinese population in Birmingham have been shown to be more likely to live in areas with high levels of air pollution, *see section 2.8.2*.

2.5.3.2 State Support

Data from the Family Resource Survey from 2019 to 2021 shows on average 51% of families received some type of state support. Families from the Chinese ethnic group had the lowest percentage of households receiving state support (25%) (**Table 34**). This includes tax credits (4%), income related benefits (8%) and non-income related benefit (23%).(124)

Table 34: State support by ethnic group: England, 2019 to 2021

Ethnicity	Any state support (%)	Any tax credits (%)	Any income-related benefit (%)	Any non-income-related benefit (%)
Chinese	**25**	**4**	**8**	**23**
White	53	5	15	50
United Kingdom (all)	51	6	16	48

Source: Department for Work and Pensions (124)

2.5.4 Housing

2.5.4.1 Tenure

Housing tenure refers to the ownership structure under which people live in their accommodation. Information on housing type by ethnicity is available from the English Housing Survey 2017 to 2018 and the 2021 census. Sample sizes for the English Housing Survey are typically smaller, and therefore 2021 census figures may be a more reliable estimate. It is important to note that the below figures from the census do not include Chinese residents in communal establishments, such as university halls of residence or care homes.

2021 census data reported that the Chinese ethnic group had a higher percentage of people renting privately or living rent free (35%) than the White British population (19%) and the Birmingham average (23%). Additionally, the Chinese population had a much smaller population living in socially rented properties (9%) compared with the White British population (20%) and the Birmingham average (24%), as seen in **Figure 34** (see **Appendix 5.32** for data table). People living in privately rented accommodation were more common in Birmingham than across England and Wales (21%); conversely social rented properties are less common nationally (17%). This is also reflected by ethnic group, nationally 28% of the Chinese ethnic group privately rented and 8% lived in socially rented properties.(141)

Figure 34: Housing tenure by ethnic group: Birmingham, 2021

Source: Office for National Statistics, census 2021 (141)

Housing data from the English Housing Survey 2017 to 2018 showed a higher percentage of Chinese households in social rented housing (10%) than the 2021 census.(148) Furthermore, home ownership rates are lower than in the 2021 census. The English Housing Survey reported that 63% of all households own their home, including 45% of Chinese households and 68% of White British households. The 2021 census showed higher overall rates of home ownership within the Chinese (64%) ethnic group, but no difference in the White British or average England and Wales home ownership rates.(149) Finally, the percentage of Chinese households who rented their home privately was also higher in the English Housing Survey (45%) but showed no difference in the White British ethnic group.(150) It is unclear whether the observed differences within the Chinese ethnic group are due to an increase in home ownership since 2018, a small sample size within the English Housing Survey, or a difference in data collection methods.

2.5.4.2 Overcrowding

Information on overcrowding by ethnicity is available from the English Housing Survey 2017 to 2018 and the 2021 census. Sample sizes for the English Housing Survey are typically smaller, and therefore 2021 census figures may be a more reliable estimate.

Households are classified as overcrowded if there are more people in the household than the recommended number of bedrooms, according to ONS suggestions. According to the 2021 census, 9.4% of all households in Birmingham were overcrowded (occupancy rating for bedrooms of -1 or -2). This was lower among both Chinese (8.7%) and White British households (7.3%).(141) The English Housing Survey suggested that from April 2016 to March 2019, 3% of the 23 million households in England were overcrowded. In this dataset, overcrowding was slightly higher among the Chinese ethnic group (4%).(151) In both data sources, the overcrowding rates of Chinese households were similar to the national averages.

One of the predictors for overcrowding is multigenerational households.(152) Published research has found that Chinese and Black Caribbean participants lived in multigenerational households (55%) less often than Black African, Indian, Pakistani and Bangladeshi participants (75%).(153) The communities that commonly lived in multigenerational households than the Chinese community were reported as having a higher percentage of overcrowded households in the 2021 census.(141)

2.5.5 Crime, Justice, and the Law

2.5.5.1 Victims of Crime

Hate Crime Statistics, recorded by the police and published by the Home Office, revealed that people from Chinese, Japanese or other South Asian ethnicity were victims of 3% of racially or religiously aggravated offences in England and Wales in 2022. People from the Chinese ethnic group were victims of a disproportionate percentage of hate crimes when compared with their total population size (0.7% of the UK population).(154)

Data is not readily available on hate crimes by ethnic group for previous years, however, some reports cited a rise in hate crimes towards those from 'Chinese/East Asian' ethnic groups following the outbreak of the COVID-19 pandemic in the UK in 2020. During this

time, reported rates of hate crimes were 2 to 3 times higher than in the previous 2 years.(155) A 2020 online study of people from 'Chinese/East Asian' ethnic groups (n=393) revealed that 34% were victims of a Sinophobic hate crime/incident between February and mid-May of 2020.(156)

Trigger events have been shown historically to predict a rise in hate crimes e.g. following the Brexit referendum there was a reported increase in hate crimes related to race and religion.(156)

The Crime Survey for England and Wales, year ending March 2020, also provides some insights into people aged 16 years and over who had been a victim of any crime. On average, in 2019 to 2020 13% (n=33,735) of all people stated that they had been a victim of crime. This is slightly lower among the Chinese population, where 10% (n=196) had cited that they were a victim of crime in the same year.(157)

2.5.6 Physical Health

2.5.6.1 General Health

The HSE recorded self-assessed general health by ethnic group, men and women from the Chinese ethnic group had the highest percentage of people report their health as 'good or very good' (81% and 84% respectively) compared with all other ethnic groups (**Table 35**).(7)

Table 35: Age-standardised self-assessed general health by ethnic group and sex: England, 2011 to 2019

Ethnicity and Sex	Health: Good or very good (%)	Health: Fair (%)	Health: Bad or very bad (%)
Chinese women	84	13	3
Chinese men	81	14	5
White British women	74	18	8
White British men	76	17	7
All Adults (White British)	75	17	7
All Adults (Chinese)	**83**	**14**	**4**

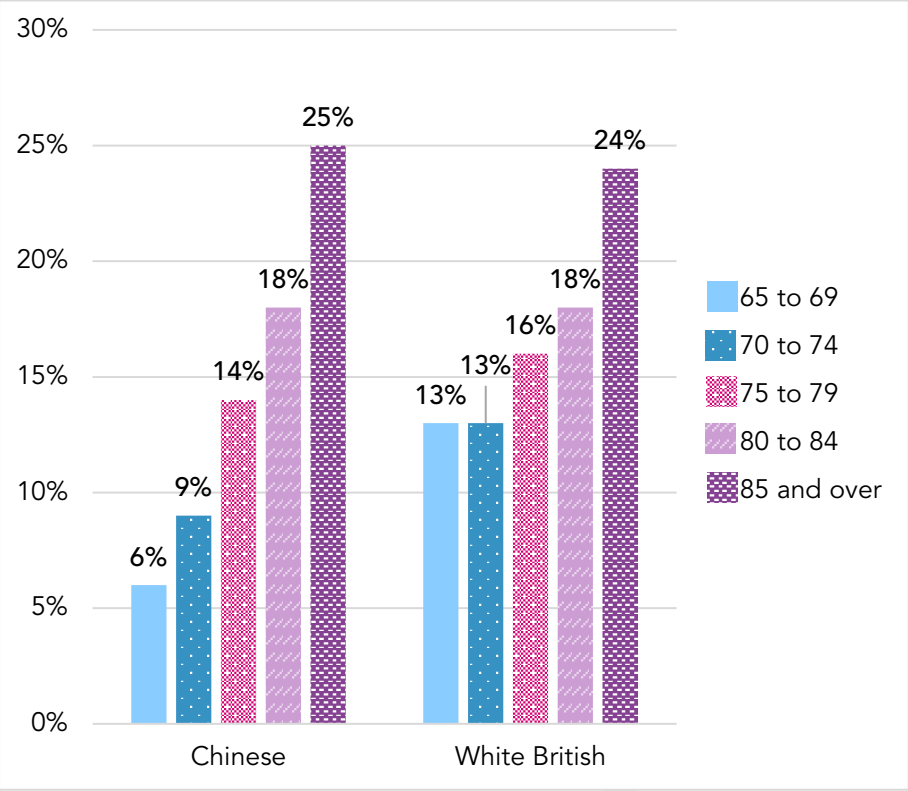
Source: NHS Digital. Health Survey for England (7)

The 2021 census also provided a breakdown of self-assessed general health on a regional level. In Birmingham, 88% of the Chinese population rated their health as "good or very good", compared with 77% of people across the city. The Chinese ethnic group also reported a lower amount of people in "bad or very bad" general health (2%) than the Birmingham average (7%).(141)

Additional analysis of general health by age is also available. Typically, general health gets worse with age; 2% of the Chinese population reported "bad" or "very bad" health between the ages

of 20 to 64, this increased to 14% in ages 65 and over. In the White British population, these values were 7% and 17% respectively (**Figure 35**, see **Appendix 5.33** for data table). The Chinese ethnic group typically had lower reported rates of "bad" or "very bad" health, with the exception of those aged 85 and over.(141)

Figure 35: Self-assessed 'bad or very bad' general health by ethnic group and age: Birmingham 2021



Source: Office for National Statistics, census 2021 (141)

2.5.6.2 Diabetes

Diabetes refers to the condition where blood glucose levels are too high and can be caused by the body not producing insulin (type 1) or producing insufficient or ineffective insulin (type 2).(158) Diabetes UK suggest that more than 4.9 million adults in the UK in 2021 were living with diabetes; 850,000 of whom were undiagnosed. Type 2 diabetes contributes to around 90% of all cases of diabetes.(159) In Birmingham (2017 and 2018) diabetes prevalence was around 8.6%, compared with 6.8% in the UK.(100)

NHS health checks record data on ethnicity, blood pressure and BMI as markers for identifying high risk individuals to undergo blood glucose testing. Patients from Indian, Pakistani, Bangladeshi, Chinese and 'Other' Asian origin were identified as having a greater risk of diabetes. Current NICE recommendations suggest blood glucose testing for adults aged 25 and older from South Asian or Chinese ethnic groups with a BMI of more than 23.(160)

A 2017 cross-sectional study (n=489,079) analysed rates of diabetes in four major ethnic groups, including Chinese (n=1,534) using UK Biobank data from 2007 to 2010. Men in all ethnic groups were found to have a higher prevalence of diabetes compared with women of a similar age; non-White ethnic groups also all had higher rates of diabetes. The study found that 7.1% of Chinese men and 5.5% of Chinese women had diabetes, compared with 6.0% of men and 3.6% of women from the White ethnic group. The highest prevalence of diabetes was found in the South Asian broad ethnic group (21.0% men, 13.8% women). Older studies, such as a national

survey conducted in China (n=46,239) in 2008 found similar results; 11% of men and 8.8% of women in the study had diabetes.(161)

Despite being at higher risk of diabetes, Chinese adults in the HSE were identified as having some of the lowest rates of doctor diagnosed diabetes; 7% of Chinese men and 4% of Chinese women had doctor diagnosed diabetes compared with 7% and 5% respectively for the White British ethnic group.(7) International journal findings on the adult Chinese population may provide some context. In a 2013 study of the adult population in China (n=170,287), 11% of the participants were found to have diabetes but only 4% of that was doctor diagnosed diabetes. Therefore, it is a possibility that the Chinese community in the UK are also underdiagnosed with diabetes.(162)

One of the most common complications of diabetes is diabetes retinopathy, a major cause of blindness in the UK. Approximately 30% of people with diabetes will develop diabetic retinopathy, screening for diabetic eye disease is a key preventative measure. In a 2017 to 2018 study conducted by the North East London Diabetic Eye Screening Programme, the Chinese sample population (n=597) had the highest rate of attendance to screening (90%) of all ethnic groups. This compares to 82% attendance from the White British sample (n=24,475).(163)

2.5.6.3 Hypertension

Hypertension, also known as high or raised blood pressure, increases the risk of heart, brain, kidney, and other diseases. It is estimated that 46% of adults with hypertension are unaware of their condition. Hypertension can be affected by diet, physical activity, smoking, alcohol consumption and weight.(164)

Blood pressure readings are composed of two numbers, the systolic pressure (top number) and the diastolic pressure (bottom number). Hypertension is defined as a blood pressure more than or equal to 140/90 mmHg (or receiving antihypertensive drug treatment). Improving hypertension control, including among those at increased risk (more than 120 mmHg systolic blood pressure), is key to reducing deaths.(165) It is estimated that 12% of the Birmingham is on the hypertension register, which compares to 13.9% nationally across the UK.(100)

The HSE provided a breakdown of hypertension by ethnic group, the Chinese ethnic group had the lowest proportion of adults with hypertension (13%); this was 28% among the White British population (**Table 36**).(7)

Table 36: Age standardised prevalence of hypertension in adults aged 16 or older by ethnic group: England, 2011 to 2019

Hypertension	Chinese (%)	White British (%)
Normotensive untreated	87	72
Hypertensive controlled	3	10
Hypertensive uncontrolled	3	6
Hypertensive untreated	7	13
All with hypertension	13	28

Source: NHS Digital. Health Survey for England (7)

2.5.6.4 Cardiovascular Disease

Cardiovascular disease (CVD) is one of the leading causes of death nationally, causing 24% of all deaths within the general population in England and Wales in 2019. CVD is the collective term for diseases affecting the circulatory system, such as the heart, arteries, and blood vessels. Diabetes increases the risk of CVD almost two-fold.(66)

There is limited data on the prevalence of CVD by ethnic group, and proportions of deaths caused by CVD. Older data from the 2004 HSE suggested that rates of CVD within the Chinese population (5%) were much lower than the general population (14%). The main forms of CVD are coronary heart disease (CHD) and stroke. In 2008, around half (48%) of all deaths from CVD were from CHD, and more than a quarter (28%) were from strokes. Among adults who were born in China, 27% of all deaths were caused by CVD, with 9% from CHD, 10% from strokes and 8% from other total CVD. Although CVD was reported as the largest cause of death in the Chinese population, all other ethnic groups showed higher proportions of deaths caused by CVD.(166) One 2015 Scottish study looked at the hazard ratio (HR) of CVD within different ethnic groups diagnosed with type 2 diabetes between 2005 and 2011. The study demonstrated the reduced risk of CVD events (HR 0.66, 95% CI 0.47 to 0.91) in the Chinese population (n=387) when adjusted for age, compared with the White sample (n=114,450).(167)

Uptake of NHS Health Checks for CVD risk assessment between April 2009 and March 2013 (n=95,571) was low across the general population (21%). Coverage among the Chinese population (n=176) was reported as lower (OR 0.68, 95% CI 0.47 to 0.96) compared with the White British population.(168) One focus group with 28 adults from the Chinese ethnic group reported that participants had low expectations of primary care services and preferred treating symptoms themselves until they become unmanageable.(169) These behaviour patterns may correlate with the low uptake of NHS Health Checks for CVD risk assessments.

A cross-sectional study conducted in the Midlands in 2008 completed analysis on the perceptions of risk factors of CVD among the Chinese population (n=436). Within the sample, participants were mainly from Hong Kong (n=215) and mainland China (n=100). The most cited risk factor associated with CVD by the sample was obesity (81%). Other behavioural risk factors were also commonly identified, including smoking (67%), exercise (64%) and diet (70%). However, the sample did not commonly refer to physiological risk factors of CVD such as being male (13%), being aged 50 or over (35%) and currently having diabetes (31%). The participants who originated from China typically scored lower across all categories than Chinese participants from other countries (e.g., Malaysia).(170)

2.5.6.5 Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) refers to a range of conditions affecting the lungs including emphysema and chronic bronchitis; COPD accounts for approximately 30,000 deaths annually.(171) Published research on COPD shows a much lower risk for all other ethnic groups when compared with the White British group.

There is limited data available on COPD prevalence by ethnic group. However, one cross-sectional study using primary care data from

London in 2013 (n=1,000,388) investigated ethnic differences in smoking intensity and COPD risk, as smoking has been identified as a major risk factor for COPD. The study aggregated Chinese/Mixed/Other ethnic groups (n=79,234), therefore clear conclusions regarding the Chinese ethnic group should be made with caution.(172)

Within the sample, 0.7% of the Mixed/Chinese/Other ethnic groups had a COPD diagnosis, compared with 3.2% of the White British group. When adjusted for smoking status and intensity the odds ratio (OR) for COPD within the Mixed/Chinese/Other ethnic groups was 0.50 (95% CI 0.44 to 0.55) when adjusting for smoking status and 0.52 (95% CI 0.46 to 0.58) when adjusting for smoking intensity.(172) ***See section 2.2.4*** on smoking for further information.

Additionally, in the 2022 GPPS 4% (n=255) of the Chinese survey participants self-reported that they had a breathing condition, such as asthma or COPD. Similar to other studies, this was much lower than the general population and White British sample where 11% (n= 71,963) and 13% (n= 60,045) reported a breathing condition, respectively.(11)

2.5.6.6 Cancer

Cancer is an illness when abnormal cells in the human body divide in an uncontrolled way with some cancers eventually spreading into other tissues across the body.(173) There are more than 200 different types of cancer, and 1 in 2 people in the UK will get cancer in their lifetime.

Research in Scotland investigated the age-adjusted incidence rates of cervical cancer for different ethnic groups from between 2008 and 2017. The highest incidence was observed in the White Scottish population (1,126.32 per 100,000); incidence was second highest among the Chinese population (486.84 per 100,000). Another London based study using data from 2015 also found high incidence of cervical cancer in the Chinese population. In this study the Chinese population were 1.9 times more likely to be diagnosed with cervical cancer than the White British population.(174) Higher rates of cancer in ethnic minority groups are often associated with low participation rates and access to healthcare; ***see section 2.6.1 on screening*** for more information.

There is limited data on rates of other cancer types by ethnic group, however one study suggested that adults from the Chinese (n=102) ethnic group have a high incidence rate of nasopharyngeal cancer.(175)

The 2022 GPPS provides some additional insight into overall prevalence of cancer; 2% (n=100) of the Chinese participants self-reported receiving either a diagnosis or treatment for cancer in the last 5 years (the survey did not specify types of cancer). This is lower than reported among the general population (3%) and the White British sample (4%).(11)

A cross-sectional survey from 2008 of ethnic minority groups, including those from the Chinese ethnic group (n=106), was conducted to understand the awareness of cancer risk factors within the groups. Compared with all other ethnic groups, Chinese respondents were more likely to mention 'lifestyle' (43%) as a risk factor than all other respondents (17%). However, the Chinese

population were less likely to cite specific risk factors, such as tobacco (33%) and alcohol (6%) than the overall sample population (55% and 19% respectively). Lifestyle contributes to approximately 30% of cancers, therefore it is vital for people to understand the specific lifestyle risk factors to enable informed decision making and behaviour change. The Chinese group were the most likely to cite environmental factors (10%), such as radiation and pollution, as cancer risk factors compared with all respondents (3.7%).(176)

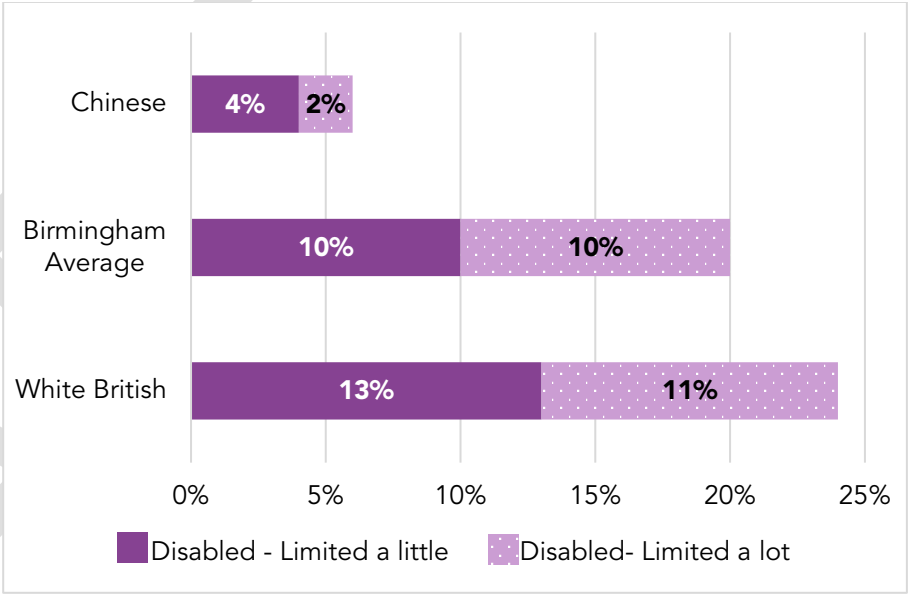
2.5.7 Living With a Physical Disability

2.5.7.1 Limiting and Longstanding Conditions

Disability was self-reported on the 2021 census. People are considered disabled if they reported being limited "a little" or "a lot" in their day-to-day activities by a LTHC. Under the 2010 Equality Act, disability is classified as having a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on the ability to do normal daily activities.(177) The Chinese ethnic group has some of the lowest rates of self-reported disability.(141)

Among the Chinese ethnic group in Birmingham, 94% cited having no condition, 4% were disabled and limited a little, 2% were disabled and limited a lot. This was lower than the Birmingham average where 10% were disabled and limited a little and 10% were disabled and limited a lot, as shown in **Figure 36** (see **Appendix 5.34** for data table). In England and Wales, 12% of the general population were disabled and limited either a little or a lot. A lower percentage of the Chinese population self-reported a disability (7%).(141)

Figure 36: Self-reported limiting disability by ethnic group: Birmingham, 2021



Source: Office for National Statistics, census 2021.(141)

There were also some gendered differences in self-reported disability: 7% of Chinese women reported a disability that limited their day-to-day activities, compared with 6% of Chinese men. This was lower than for both sexes in the White British population: 25% of White British women reported rates of limiting conditions compared with 22% of White British men (**Table 37**).(141)

Table 37: Self-reported limiting disability by ethnic group and sex: Birmingham, 2021

Ethnic Group and Sex	Disabled, limited a little (%)	Disabled, limited a lot (%)
Chinese Men	4	2
Chinese Women	5	2
All Adults (Chinese)	**4**	**2**
White British Men	12	10
White British Women	14	11
All Adults (White British)	13	11

Source: Office for National Statistics, census 2021.(141)

According to the HSE, 20% of the Chinese population had a longstanding condition, compared with 42% of the White British population (**Table 38**). The Chinese ethnic had the lowest reported rates of longstanding or limiting longstanding conditions compared with all ethnic groups. (7)

Table 38: Age standardised prevalence of longstanding and limiting longstanding conditions among adults aged 16 and older, by ethnic group: England, 2012 to 2018

Condition	Chinese (%)	White British (%)
Any longstanding condition	20	42
One longstanding condition	8	23
Two or more longstanding conditions	10	20
Any limiting longstanding conditions	12	25

Source: NHS Digital. Health Survey for England.(7)

Less Chinese women reported having any longstanding condition (19%) or limiting longstanding condition (11%) than Chinese men (28% and 11% respectively). This trend is reversed when analysing the White British population; 44% of women have a longstanding condition and 27% have a limiting longstanding condition (40% and 23% for White British men respectively).(7)

The Chinese ethnic group also reported having 'general multimorbidity' (defined as two or more longstanding conditions) less frequently compared with the White British population.(178) Between 7% and 10% of the Chinese population had general

multimorbidity, compared with 20% of the White British population.(7, 179)

2.5.7.2 Sight Loss

Published research from 2015 investigated refractive error (sight loss) among UK adults aged 40 to 69 (n=107,452) using UK Biobank data from 2010. The Chinese ethnic group (n=490) had the highest frequency of myopia (short-sightedness) in men (51%) and women (45%), nearly twice as high than other ethnic groups. This increased risk is also presented by the OR of 1.86 within the Chinese sample (95% CI 1.54 to 2.23). Myopia frequency was reported as 27% within the White British sample population (OR 1) and 27% in the total population.(180)

The GPPS reported self-assessed blindness or partial sight; there was no difference reported in the Chinese sample (1%) when compared with the general population and the White British sample.(11)

2.5.7.3 Access to Services

Statistics from the Health and Social Care Information Centre reported that between April 2012 and March 2013, only 0.1% of adults receiving public services for a physical disability were from Chinese backgrounds.(181) One small study analysed the experiences of people from Chinese backgrounds in England (n=26) with physical disabilities from 2012 to 2013. The study found that underutilisation of disability support services was commonplace within the Chinese community, with several of the study participants believing that they had to be hospitalised to receive social care. Some of the other barriers identified included wider lack of knowledge of the available services and language barriers, especially among 1st generation immigrants.(181)

2.5.8 Neurodivergence

There is limited data on neurodivergence within the adult Chinese population in the UK. For information on neurodivergence among Chinese children in England, please ***see section 2.1.9.5****.*

Neurodiversity relates to natural variations in human neurocognitive functioning, and includes a range of neurodevelopmental conditions (e.g., ADHD, Autism Spectrum Disorder, Dyslexia, Dyspraxia, Dyscalculia and Dysgraphia). It is estimated 15% of the UK's population (1 in 7) is neurodivergent.(182)

2.5.9 Quality of Life

The APS (wellbeing 2017 to 2018) provides insight into life satisfaction by ethnic group. Overall, between 2017 and 2018 the average life satisfaction score was 7.7 (out of 10). Life satisfaction was reported as being slightly lower among Chinese adults (7.6). Additionally, people from the Chinese ethnic group reported low levels of 'very high' life satisfaction (24%) when compared with all ethnic groups in the UK (31%). Trend data indicated that life satisfaction increased across all ethnic groups between 2012 and 2018 by an average of 0.25, this observed increase was the smallest amongst the Chinese population (0.16).(183)

The APS also asked a sample population how worthwhile they felt the things they did in life were, the average score was 7.9 out of 10. This score was the lowest amongst the Chinese ethnic group (7.6). Furthermore, fewer people in the Chinese ethnic group (27%) reported having 'very high' worthwhile feeling than across all ethnic groups (36%).(184)

However, these findings must be interpreted with caution. The APS report noted wide variations in responses reported from the Chinese ethnic group, therefore firm conclusions cannot be drawn.

2.5.10 Access to Health and Social Care Services

The 2022 GPPS investigated how different ethnic groups described their experiences of their GP practice, the results are summarised in **Table 39**. Overall, the Chinese ethnic group less frequently rated their experience as 'Very Good' (26%) compared with the general population (38%).(11)

Table 39: GP practice experience by ethnic group: England, 2022

GP Experience	Chinese (%)	White British (%)	General Population (%)
Very Good	26	40	38
Fairly Good	41	34	35
Neither Good nor Poor	24	13	14
Fairly Poor	6	8	8
Very Poor	3	5	6

Source: GP Patient Survey.(11)

Additionally, the GPPS explored whether patients had confidence and trust in the healthcare professionals during GP appointments. The Chinese ethnic group reported lower levels of 'definitely' (49%) having trust in their healthcare professional than the general population (62%) (**Table 40**).(11)

Table 40: Patients trust and confidence in healthcare professionals during GP appointments by ethnic group: England, 2022

Trust and Confidence in GP	Chinese (%)	White British (%)	General Population (%)
Yes, definitely	49	66	62
Yes, to some extent	39	26	28
No, not at all	7	6	7

Source: GP Patient Survey.(11)

There are several reports which discuss the barriers for the Chinese community when accessing social care services; recurring themes of underutilisation of the services are noted. Typically, there is a preference for the Chinese community to manage health needs in a personal setting, such as their own home rather than seeking professional support.(185) Additionally, the services which are offered are not always relevant or appropriate for the Chinese community.

One report suggested that some Chinese adults would prefer the option to be offered tradition medicines within their GPs and the NHS in conjunction with medicines commonly offered on the NHS.

Increasing the cultural awareness of medical professionals in the UK may increase service use and reduce exclusions from health care services.(186) Additionally, it has been suggested that utilisation of local Chinese community organisations to support citizens in need of social care may increase uptake of services.(187)

Other barriers present when accessing social care services mirror that of barriers discussed when accessing other health services, including language barriers, lack of information regarding the available services and lack of support.(188)

2.6 Protect and Detect

Key Findings

- A 2014 study on screening uptake in the North West of England (N=214) found that just over half (n=54) of the eligible Chinese population had attended cervical cancer screening (79% average across ethnic groups).
- Chinese men had the highest rate of colorectal cancer screening attendance (51%) in London between 2012 and 2017, followed by White British men (49%).
- 88% of Chinese adults aged 50 or over in England had received 2 or 3 doses of the COVID-19 vaccine by December 2021 (95% White British).
- The Chinese population had higher rates of gonorrhoea (113 per 100,000) and Syphilis (18.7 per 100,000) than the England averages (90.3 and 13.3 per 100,000 respectively) in 2021.
- Approximately 9% of Chinese adults were identified as having Hepatitis B in a 2012 study in the North East of England, higher than UK average prevalence of between 0.1% to 0.5%.
- Tuberculosis infections in 2020 were higher among the non-UK born Chinese group (21.3 per 100,000), than the UK born Chinese group (2.0 per 100,000) in England.

2.6.1 Cancer Screening

Cancer is one of the major causes of death in the UK, with more than 1 in 4 deaths in the UK being attributed to cancer in 2019.(189) Diagnosis at an early stage of cancer development can improve survival chances; health interventions, such as screening programmes, are an important part of efforts to reduce cancer mortality.

In 2017, it was found that the Chinese ethnic group in England had the highest percentage of cancers diagnosed at an early stage (stage 1 or 2) at 56% compared with all other ethnic groups; 52% of the White ethnic group had cancers diagnosed at an early stage.(190)

2.6.1.1 Cervical Cancer

Cervical screening helps identify pre-cancerous cell changes in the cervix. These changes can be treated, preventing cancer from developing. Cervical screening is believed to save up to 5,000 lives a year in the UK.(191) Cervical screening is offered to all women and people with a cervix every 3 years for those aged 25 to 49, and every 5 years from the ages of 50 to 64.(191)

Research has suggested that women from the Chinese ethnic group had a higher percentage of non-attendance to cervical cancer screening compared with the White British ethnic group. Quantitative research from 2014 on screening uptake within a sample of 214 Chinese women, in the North West of England found that just over half of female respondents aged over 30 had attended

screening at least once (n=54), this is compared with an average uptake of 79% nationally across ethnic groups.(12)

This survey also identified some of the main barriers to accessing cervical cancer screening. A third of the respondents did not have confidence in the local health services. The most common frustrations with the health services were due to long waiting times (54%) and potential language barriers (33%). Due to the perceived wait times and confidence in the healthcare services, 41% (n=77) of participants had considered travelling abroad for healthcare.(12)

Other barriers surrounding uptake were identified in a 2019 Scottish study with participants from multiple ethnic groups (N=50), including Chinese (n=10). The barriers included poor knowledge of the services, and lack of information provided by their GP. The lack of knowledge was also paired with belief in misinformation surrounding screening. Additionally, participants noted difficulties related to ignorance, racism and the lack of representation in the training and experience of health care practitioners.(192)

2.6.1.2 Breast Cancer

Breast screening prevents approximately 1,300 women from dying of breast cancer every year in the UK.(193) Uptake of breast cancer screening is defined as the proportion of women invited who attend from screening within 6 months of their invitation. Breast screening is offered to women aged 50 to 70 to detect early signs of breast cancer. Women over 70 can self-refer as well.

Overall, rates of breast cancer screening within the Chinese population are high. One 2014 London based study using uptake data from 2006 to 2009 found that the Chinese ethnic group were as likely to attend as the White British population in all areas sampled. Due to small samples sizes ORs very significantly.(194) Another study corroborated these findings, showing that 85% (n=23) of Chinese women eligible for breast cancer screening had attended, compared with national average of 77%.(12)

However, a 2012 Scottish study (N=32,523) identified that non-attendance to breast cancer screening from 2002 to 2008 was slightly higher in the Chinese sample population (26%, n=114), compared with the White Scottish population (23%, n=28,398).(195)

In addition, a study from the National Cancer Intelligence Network (NCIN) explored the proportions of patients in each stage group of cancer and its associations between stage and ethnicity between 2012 and 2013. It found that after adjustment for age, sex, deprivation status, among Chinese patients with known stage, 73% were diagnosed with breast cancer at an early stage, 10% were late stage, 17% were unknown. This is compared with White British patients where 70% were diagnosed at an early stage, 13% were late stage and 17% were stage unknown. The study states that the stage at diagnosis may be related to a patient's route to diagnosis, including whether the cancer was detected by screening. The Chinese ethnic group had the highest proportion of patients diagnosed with breast cancer at an early stage, which may suggest that studies showing high screening attendance is reflective of behaviours demonstrated by the Chinese community.(196)

2.6.1.3 Colorectal Cancer

Bowel cancer screening for colorectal cancer is offered to everyone aged 60 to 74, using a home test kit every 2 years. Colorectal cancer screening can prevent cancer through the detection and removal of precancerous growths and detect cancer at an early stage when treatment is usually more successful.(197)

Uptake of colorectal cancer screening is typically lower across all ethnic groups compared with breast and cervical cancer screening. Research from London identified that the White British population had the highest attendance for the Bowel Cancer Screening Programme (BCSP) between 2012 and 2017 at 53%; attendance in the Chinese population was 51%. Chinese men had the highest rates of colorectal cancer screening attendance (51%), followed by White British men (49%). Attendance was higher in both Chinese (58%) and White British (56%) women.(198) The rates of early diagnosis of colorectal cancer were also similar between the Chinese (37%) and White British (40%) ethnic groups.(196)

2.6.1.4 Prostate Cancer

There is currently no national screening programme for prostate cancer in the UK, partly because the screening is not accurate enough to detect all cases of prostate cancer that require treatment. Therefore, there is limited data on prostate cancer screening uptake within the Chinese community.

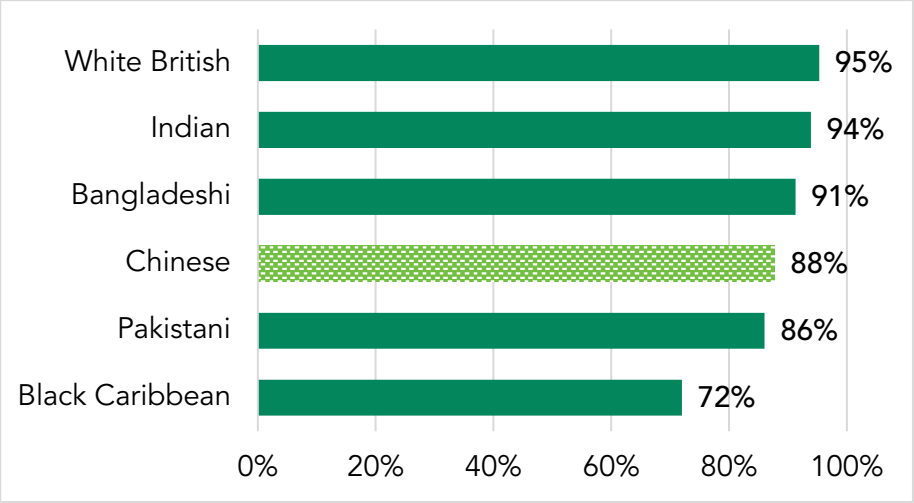
Prostate cancer makes up approximately 15% of cases of cancer among Chinese men, compared with 25% of all men. Rates of early diagnosis of prostate cancer are typically higher among the Chinese ethnic group (56%) than White British group (47%). This mirrors early diagnosis for multiple cancers.(196)

2.6.2 Vaccination Programmes

2.6.2.1 COVID-19 Vaccine

According to ONS data, among adults aged 50 years and over, the Chinese ethnic group had high vaccination rates (88%) (**Figure 37** (see **Appendix 5.35** for data table). Vaccination rates were higher in the White British (95%), Indian (94%) and Bangladeshi (91%) populations, but lower in all other ethnic groups.(199)

Figure 37: COVID-19 vaccination rates of adults aged 50 years and over, by ethnic group: England, December 2020 to December 2021



Source: Office for National Statistics, National Immunisation Management Service (199)

Note: Figures were based on individuals who had received two or three vaccines administered between 8 December 2020 and 12 December 2021 for residents in England

A full breakdown of the number of vaccines administered within this time frame can be seen in **Table 41**.

Table 41: Age standardised COVID-19 vaccinations administered to adults aged 50 years and over, by self-reported ethnic group: England, December 2020 to December 2021

Ethnic Group	No vaccinations (%)	One vaccination (%)	Two vaccinations (%)	Three vaccinations (%)
White British	3.8	0.9	18.6	76.7
Indian	4.8	1.3	20.0	73.9
Chinese	**10.8**	**1.5**	**22.2**	**65.5**
White Other	14.2	1.4	19.7	64.6
Mixed	11.9	1.9	22.9	63.3
Other	11.7	1.9	25.3	61.1
Bangladeshi	6.4	2.3	40.1	51.2
Black African	18.0	3.1	33.5	45.4
Black Caribbean	25.2	2.8	27.6	44.4
Pakistani	10.3	3.7	43.8	42.2

Source: Office for National Statistics, National Immunisation Management Service (199)

One study (n=11,584) investigated vaccine hesitancy among healthcare workers across the UK between December 2020 and March 2021, who were a priority for vaccination. The Chinese sample (n=253) had higher rates of vaccine hesitancy (32%) than the White British population (21%). The highest hesitancy was recorded in the Black Caribbean group (51%).(200)

2.6.2.2 Other Routine Vaccinations

QResearch data provides some additional insight into vaccinations offered to older adults aged 65 years and over, including the influenza vaccine and pneumococcal vaccine (n=2,054,463), and the shingles vaccine (n=1,513,191) for adults aged 70 years and over. For all vaccines, the Chinese ethnic group had lower vaccine uptake when compared with the White British ethnic group (**Table 42**).(67)

Table 42: Maximally adjusted odds ratios for the uptake of routine vaccines in older adults, by ethnic group: United Kingdom, 2020

Ethnic Group	Infleunza	Pneumococcal	Shingles
White British	1	1	1
Indian	1.09	1.22	0.96
Pakistani	0.84	1.10	0.77
Bangladeshi	1.30	1.54	0.87
Chinese	**0.74**	**0.79**	**0.74**
Other Asian	0.98	1.03	0.89

Source: Scientific Advisory Group for Emergencies, QResearch (67)

2.6.3 Sexual Health

The World Health Organization (WHO) states that 'sexual health-related issues are wide-ranging, and encompass sexual expression, relationships, and pleasure. They also include negative conditions such as sexually transmitted infections (STIs)'.(201) The UK Health Security Agency (UKHSA) provided information on the rates of STI diagnoses by ethnicity in 2021.

The Chinese population had higher rates of gonorrhoea (113 per 100,000) and Syphilis (18.7 per 100,000) than the England averages (90.3 and 13.3 per 100,000 respectively), as seen in **Table 43**.(202)

Table 43: Rate of STI diagnosis (per 100,000 population), by ethnic group: England, 2021

STI	Chinese	White British	England Average
Chlamydia	256.9	185.4	282.0
Gonorrhoea	113.0	55.7	90.3
Herpes	24.2	33.6	38.3
Syphilis	18.7	8.6	13.3
Genital Warts	39.5	41.7	50.0
Overall Diagnoses	509.6	373.9	551.0

Source: UK Health Security Agency (202)

A 2016 study investigating the adjusted odds ratios (aORs) of STIs in England, using diagnosis data from sexual health clinics in 2013, found mostly similar trends to the UKHSA data. The report showed that when compared with the White British group (aOR=1) the Chinese ethnic group had high rates of syphilis diagnoses (OR=1.40, 95% CI 1.01 to 1.95), and low rates of genital herpes (OR=0.59, 95% CI 0.49 to 0.70) and genital warts (OR=0.60, 95% CI 0.53 to 0.68) diagnoses. The only discrepancy between this study and the UKHSA data was that this study found the Chinese population had low rates of gonorrhoea diagnoses (OR=0.73, 95% CI 0.63 to 0.85) than the White British group.(203) It is unclear whether this discrepancy is due to changes in STI prevalence among the Chinese community from 2013 to 2021 or difference in methodology in data collection.

2.6.4 COVID-19 and Other Respiratory Infections

Respiratory infections or diseases are an umbrella term for conditions which affect the airways and other structures of the lungs. Respiratory disease affects one in five people and is the third biggest cause of death in England; they include pneumonia, influenza, Coronavirus disease (COVID-19) and COPD (***see section 2.5.6.5*** for more information on COPD).(204)

Acute lower respiratory infections are associated with significant morbidity and mortality. One Scottish study compared the hospitalisation rates for lower respiratory tract infections in different ethnic groups. The adjusted risk ratios (aRR) show that when compared with the White Scottish population (RR=100), the Chinese ethnic group had nearly a 30% lower risk for hospitalisation (**Table 44**).(205)

Table 44: Adjusted risk ratios for all lower respiratory tract infections by ethnic group and sex: Scotland, 2010

Ethnic Group	All lower respiratory infection (count)	Adjusted risk ratio and 95% CI
White British Men	5,912	79.5 (73.2,86.3)
White British Women	6,031	84.9 (78.9,91.4)
Chinese Men	94	**68.6** (55.8,84.4)
Chinese Women	87	**68.1** (56.4,82.3)

Source: Simpson *et al.,* Journal of the Royal Society of Medicine (205)

COVID-19 is an infectious disease caused by the SARS-CoV-2 virus which first began to spread in the UK in early 2020. During the first wave of the pandemic, certain ethnic groups had disproportionately higher mortality rates for deaths involving COVID-19. The age standardised mortality rate for Chinese men between 2 March and 15 May 2020 was 119.5 per 100,000; this was higher compared with men from the White ethnic group (87.0 per 100,000). All men from non-White ethnic groups had higher reported mortality rates. For women, all ethnic groups other than Chinese (65.4 per 100,000), had a higher rate of death compared with White females (52.0 per 100,000).(206)

However, newer data from November 2022 reveals that since Omicron became the main variant of COVID-19 (since January 2022) there was no longer evidence of ethnic minority groups having considerably higher COVID-19 mortality. Men from the Chinese ethnic group now had lower mortality rates from deaths involving COVID-19 (65.6 per 100,000) than the White British population (103.9 per 100,000).(207) This was also seen among women, with Chinese women having lower mortality rates from deaths involving COVID-19 (43.2 per 100,000) than White British women (65.5 per 100,000) since the Omicron wave (wave 5). This was further demonstrated by patterns of all-cause mortality, which in the latest period suggests a return to patterns observed prior to the pandemic.(208)

2.6.5 Other Infectious Diseases

2.6.5.1 Hepatitis B

Hepatitis B (HBV) is a vaccine-preventable liver infection which is spread through blood, semen, and vaginal fluids. If left untreated, chronic infection can cause liver cancer and cirrhosis. Prevalence of HBV in the UK is typically low, with a carriage rate of 0.1% to 0.5%.(209) However, several studies have indicated that HBV infection is more common within the British Chinese population.

One 2012 study screened British Chinese (n=606) and British South Asian (n=520) participants for the HBV surface antigen (HBsAg) in the North East of England. HBV was found to be much higher in the Chinese sample population (8.7%) than the South Asian population (1.7%). Several participants in the sample identified that they had not been referred to a specialist for treatment despite a previous diagnosis.(13) Additionally, this study highlighted that country of birth influenced the prevalence of HBV within the Chinese

population. HBsAg positivity was highest in Chinese participants born in Vietnam (17%), followed by mainland China (11%), Hong Kong (7.8%) and the UK (6.7%).(13)

Smaller studies have corroborated these findings of high rates of HBV within the Chinese population. A 2013 study based in Sheffield tested for HBsAg in 229 Chinese participants and found that 8.7% (n=20) participants were HBsAg positive and 12.2% (n=28) had evidence of a past HBV infection. Hepatitis C screening was also undertaken but produced negative results in all participants.(210) HBV was also found to be high across particular subgroups within the Chinese community; a three-year retrospective study identified high rates of HBV among pregnant Chinese women (43.01 per 1,000), compared with the White British population 0.4 per 1,000).(209)

Several qualitative studies have been conducted to develop understanding of the high rates of HBV within the Chinese population. Some studies identified that there was a lack of knowledge surrounding causes and transmission of HBV, such as citing that a 'weak liver' causes HBV.(211, 212) There is also little social discourse and considerable stigma associated with the disease among some groups within the Chinese community, which may contribute to lack of knowledge and treatment uptake observed.(211) It has been suggested that targeted HBV screening and support within the Chinese population could potentially detect up to 31,000 cases of HBV nationally.(13)

Hepatitis has been included in the Fast Track Cities Plus Initiative, committed to by Birmingham City Council. The initiative seeks, by 2030, to reduce chronic hepatitis B and C infections by 90% and reduce deaths by hepatitis B and C by 65% when compared with levels from 2015.(213)

2.6.5.2 Tuberculosis

Tuberculosis (TB) is a serious infectious disease and is currently one of the key priorities of the UKHSA. The disease is characterized by the growth of nodules (tubercles) in the tissues, especially the lungs. While there are signs of a decreasing trend in new TB cases, the UK still has high rates compared with most other European countries. The highest rates of disease are found predominantly in those born outside the UK.(133)

Research has found that reactivation of latent infections acquired outside the UK accounts for much of the disease burden, though there is also evidence that transmission within communities in the UK may be an increasing challenge.(133)

In 2020, those from the Chinese ethnic group born in the UK had almost the lowest rate of TB (2.0 per 100,000); lower only in the White ethnic group (1.5 per 100,000). Similar to trends observed in all ethnic groups, TB is much higher in the Chinese non-UK born population (21.3 per 100,000), as shown in **Table 45**.(214)

Table 45: TB rates by ethnic group and place of birth: England, 2020

Note: due to the COVID-19 pandemic in 2020, data from this period may not represent the true burden of the disease.

Ethnic group	UK born rate per 100,000	Non-UK born rate per 100,000
Pakistani	17.8	99.6
Indian	10.7	90.9
Black-African	16.6	86.8
Black-Other	18.7	51.0
Bangladeshi	9.2	43.0
Mixed/Other	4.1	37.0
Chinese	**2.0**	**21.3**
Black-Caribbean	10.0	17.9
White	1.5	8.2

Source: UK Health Security Agency (214)

Tuberculosis has been included in the Fast Track Cities Plus Initiative, committed to by Birmingham City Council. The initiative seeks, to reduce TB incidence by 90% and TB deaths by 95% when compared with levels from 2015.(213)

2.6.6 Oral Health

The adult Chinese population generally have good oral health, in contrast to Chinese children (***see section 2.1.6***). Published research (n= 45,599) investigated the prevalence of edentulousness (tooth loss) by pooling HSE data from 1999 to 2005 showed that those from Pakistani (2.6%), Bangladeshi (2.8%), Chinese (2.9%) and Indian (3.9%) ethnic groups had lower percentages reporting missing teeth than the White British group (12%).(215, 216) Within this study the Chinese population (n=717) were found to have lower odds of having tooth loss (OR 0.41, 95% CI: 0.25 to 0.66) than the White British sample (n= 36,103).(216)

Additional research on oral health within the Chinese community (n=679) found that edentulousness was higher among those who were 1st generation migrants (n=558) (3.6%, 95% CI 2.3 to 5.6) than 2nd generation migrants (n=121) (1.3%, 95% CI 0.2 to 8.8).(217) However, both 1st and 2nd generation migrants had lower risk of tooth loss than the White British population (12%, 95% CI 11.4 to 13.0).

2.7 Ageing Well and Dying Well

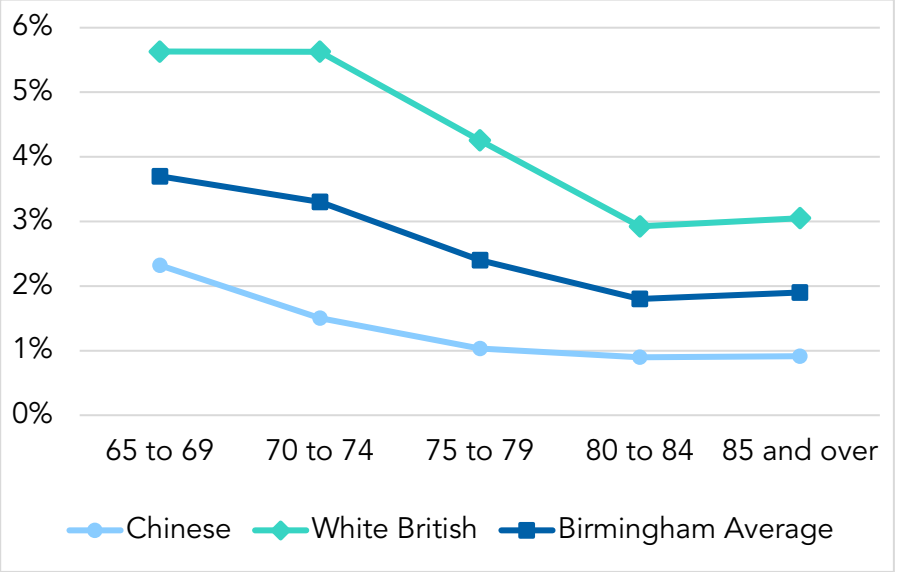
Key Findings

- The 2021 census identified that the Chinese ethnic group had a young age profile, 6.7% were aged 65 years and over (13% Birmingham average).
- Disability-free life expectancy was reported as highest amongst the Chinese ethnic group; 67.0 for Chinese men and 64.7 for Chinese women in a 2018 PHE report (63.6- and 62.8-years England average respectively).
- One study suggested that dementia prevalence is higher among non-English speaking Chinese population (21%) than among English-speaking Chinese individuals (5%).
- Research indicates that the Chinese population were more likely to view dementia and Alzheimer's disease as a normal part of ageing compared with their White counterparts.
- In one study using the De Jong Gierveld loneliness scale, the Chinese participants scored highest on total loneliness (2.8) when compared with the overall sample population (2.5).
- In 2021, 3,380 Chinese adults in England were in receipt of long-term support. This includes those in nursing, residential, community or prison settings.

2.7.1 Life Expectancy and Healthy Life Expectancy

The 2021 census identified that the Chinese ethnic group had a young age profile, with those aged 65 and over only accounting for 6.7% of the total Chinese population in Birmingham, in contrast to 22% of the White British population and 13% of the Birmingham average (**Figure 38**, see **Appendix 5.36** for data table).(42) Birmingham as a city in 2021 had a younger age profile across all demographics than the England and Wales average. In England and Wales, 8.5% of the Chinese population were aged 65 years and over; 23% White British and 18% England and Wales average.

Figure 38: People aged 65 and over by ethnic group: Birmingham, 2021



Source: Office for National Statistics, census 2021 (42)

Data on life expectancy for the Chinese ethnic group in the UK is not available as ethnicity is not recorded at death registration. However, data is available on the disability-free life expectancy (DFLE) by ethnic group. DFLE can be defined as "the average number of years a person would live disability-free (no limiting long-term illness) if they experienced the average age-specific mortality and health rates throughout their life".(218)

Estimates have shown that the Chinese ethnic group have the highest DFLE compared with all other ethnic groups; a DFLE of 67.0 was recorded for Chinese women and 64.7 years for Chinese men in the 2018 PHE report 'Local action on health inequalities: Understanding and reducing ethnic inequalities in health'.(133) This was higher than the England average which was recorded as 63.6 years and 62.8 years respectively between 2018 and 2020.(219) This finding correlated with previous sections of this report which revealed that the Chinese ethnic group had low prevalence of limiting long-term conditions (***see section 2.5.7***).

Data on mortality by leading cause is not recorded for people of Chinese ethnicity. Data for the Chinese population is summarised in the 'Other' ethnic group so may not be an accurate reflection of the Chinese population. In 2017 to 2019, for males across all ethnic groups in England and Wales, except Black Caribbean, the leading cause of death was heart disease.(220) For women in this same time period, the leading causes of death were dementia and heart disease.(220)

2.7.2 Dementia

Dementia and Alzheimer's disease represented 13% of all death registrations in England and Wales among the general population (200,111) between the period of 2017 to 2019.(220) Although data is not available on the mortality rates of dementia within the Chinese population, research from Liverpool in 1997 suggested that dementia prevalence was higher in the non-English-speaking Chinese population (21%) than among English-speaking Chinese individuals (5%). This presents some challenges for those accessing dementia support who do not speak English.(221)

Several published studies have also shown that older adults and their relatives from the Chinese ethnic group were aware of dementia services provided via their GP.(221) However, there is evidence to suggest that the Chinese population were more likely to view dementia and Alzheimer's disease as a normal part of ageing compared with their White counterparts. This may inhibit health seeking behaviours.(222)

Additionally, data from one small study (n=31) suggested there was some stigma associated with the condition that may contribute to the low take-up of dementia specialist services. In this study, the option for dementia support via home visit from Chinese Voluntary and Community Sector Organisations were a preferred option for care as the participants were confident that their privacy would be maintained.(223)

To support Birmingham residents living with dementia, the Birmingham, and Solihull Integrated Case System (BSOL ICS) have launched a Dementia Strategy for 2023 to 2028. The Strategy aims

to enable all people with dementia and those who care for them, to have the best possible health and social care support through their dementia journey.(224) This will be achieved through 4 key priorities:

1. Information which focuses on prevention of dementia, early intervention and support.
2. Access to a timely diagnosis with support before and after.
3. Supporting people with dementia, their loved ones, carers, and communities to prevent crisis.
4. Improving the quality of personalised care and support planning for people with dementia, including planning for the end of life.(224)

2.7.3 Frailty

The NHS defines frailty as "the group of older people who are at highest risk of adverse outcomes such as falls, disability, admission to hospital, or the need for long term care".(225) Several studies have used osteoporotic fractures as a predictor of frailty; therefore we can assess the prevalence of osteoporosis within the Chinese ethnic group to gain some understanding of frailty within this group.(226)

Osteoporosis is a skeletal disease which is characterised by low bone mineral density or the occurrence of a fragility fracture.(226) The International Osteoporosis Foundation reported that overall prevalence of osteoporosis in mainland China was approximately 7% among adults, with higher prevalence among women aged 50 years or older (50%) than men of the same age (23%).(227) This is higher than data recorded in the UK which shows average prevalence of osteoporosis of 2% at aged 50 years of age and 50% at 80 years of age. In both countries, osteoporosis is more common in women due to decreases in oestrogen production at the menopause which can accelerate bone loss.(228)

Low calcium and vitamin D intake have been associated with osteoporosis risk due to these vitamins contributing towards bone health. Research has indicated that the traditional Chinese diet is low in calcium due to the low consumption of milk and milk products or other alternative fortified milk products. Additionally, vitamin D deficiency was observed among Chinese participants in almost all age groups within a sample population. Despite these factors, the rates of fracture were lower than in the White British population.(229) These studies may provide insight into recent migrants to the UK from China, however, more data is needed to fully understand frailty risk factors of the UK Chinese population.

The GPPS also reviewed fall outcomes among patients, which is another predictor of frailty. When asked "Have you experienced two or more falls that have needed medical attention over the last 12 months" the responses were similar across all ethnic groups: 2% (n=147) of Chinese patients stated that they had experienced falls requiring medical attention, 2% was also observed among White British patients and the average for all patients across England. (11)

2.7.4 Loneliness and Isolation

According to statistics from the ONS, in 2016 to 2017, 5% of adults in England reported feeling lonely 'often' or 'always'.(230) National data for loneliness by ethnic group is not readily available, however one study investigated feelings of loneliness 'often' or 'always' among 1,204 mid-life and older adults (n=156 Chinese participants)

in England and Wales between 2011 and 2012. This study concluded that the Chinese population more commonly reported feelings of loneliness (14%) when compared with five other ethnic groups.(14)

The study also investigated loneliness in this sample population using the six-item De Jong Gierveld scale (DJG), which aids in differentiating between emotional and social loneliness. Levels of loneliness were higher across the board when using this scale; loneliness ranged from 13% within the Indian ethnic group to 36% in the Chinese ethnic group. The Chinese ethnic group also self-reported the highest levels of emotional loneliness compared with the five other ethnic groups included in the study (Black Caribbean, Black African, Indian, Pakistani, Bangladeshi). The mean DJG scores within the Chinese ethnic group can be seen by **Table 46**.(14)

Table 46: De Jong Gierveld loneliness scale by ethnic group: England and Wales, 2021

DJG Score (mean)	Total	Chinese
Total Loneliness (0 to 6)	2.5	2.8
Emotional Loneliness (0 to 3)	1.0	1.3
Social Loneliness (0 to 3)	1.4	1.4

Source: Victor *et al.,* European Journal of Ageing (14)

Published research has also identified subgroups within the Chinese population who are more susceptible to loneliness. The identified risk factors included being female, having never married or were divorced or widowed, and those in poor health.(231, 232) These groups closely mirror those nationally who are more likely to experience loneliness.(230)

2.7.5 Care Homes and Domiciliary Care

From March 2021 to February 2022, there were an estimated 360,792 care home residents in England, data on care home residents by ethnic groups is not available.(233) Data from the Adult Social Care Activity and Finance Report provided an overview of the number of Chinese adults receiving long term adult social care support in England. In 2021 3,380 Chinese adults were in receipt of long-term support. This includes those in the following support settings: nursing, residential, community or prison.(234)

As seen throughout this report, the Chinese ethnic group are frequently observed to limit seeking healthcare from specialists and prefer self-management until necessary. This is also reported in older Chinese adults, which may suggest that utilisation of care home is low among the Chinese population.(235)

One 2019 study investigated family carers by ethnic group in England and Wales. In the general population (n=1,206) around 15% of adults were found to be family carers; lower levels (11%, n=156) were reported among people of Chinese.(153)

2.7.6 End-of-life and Palliative Care

Palliative care, encompassing end-of-life care, is an approach that aims to provide optimal quality of life to people with life-limiting incurable diseases and their families. There is no information on the

number of Chinese people in end-of-life care in the UK or Birmingham.

One systematic review explored the experiences and perspectives of end-of-life care among Chinese migrants in non-Asian countries including the UK. Participants in one study demonstrated the importance of family values and discussed how care decisions were often made collectively as a family. Additionally, it has been found that within the Chinese community, family carers were often reluctant to seek external assistance and preferred not to disclose the terminal nature of illness to their sick family members.(236) These findings would suggest a lower uptake of palliative and end-of-life care.(237)

Several studies have investigated the barriers to accessing end-of-life care among the Chinese community. Some of the barriers included lack of culturally appropriate care, language barriers, difference in food preferences of facilities, inability to effectively communicate end-of-life care needs and differences in spiritual and cultural beliefs.(236, 237)

2.8 Contributing to a Green and Sustainable Future

Key Findings

- Bordesley & Highgate ward in Birmingham contained the highest proportion of Chinese residents in 2021 (6.3%), this ward was classified in 2014 as an area of the city with the least environmental justice (0.40) for citizens.
- Approximately 27% of the Chinese community live in the 15 most polluted MSOAs in Birmingham, according to MHCLG data from 2020, compared with 5.4% of the White British population.
- The Chinese population in Birmingham is likely vulnerable to the Urban Heat Island effect due to high concentrations of the population living in central areas of the city.

The Environmental Justice map combines 5 indicators, namely, the index of Years of Life Lost (YLL), UHI effect, the Indices of Multiple Deprivation (IMD), Public green spaces access and flood risk. The indicators are combined and scaled in a range of 0 to 1, with 0 being the most preferred and 1 being the least. The wards in Birmingham vary from scores of 0.12 in Sutton Roughley to 0.43 in Balsall Heath West.(15)

The largest Chinese populations in Birmingham are in Ladywood, Bournbrook & Selly Park, Edgbaston, Bordesley & Highgate and Harborne; these wards have large variations in their mean environmental justice score (**Table 47**).(15)

Bordesley & Highgate, Nechells and Pype Hayes are classified as areas of the city where there is the least environmental justice for citizens living there. Access to green spaces is lowest, the areas are UHIs, at risk of flooding, have high levels of deprivation and people have worse health and wellbeing. This raises concerns for the large proportions of the Birmingham Chinese population living in these wards.(15)

Table 47: Environmental Justice Map scores for wards with largest Chinese populations: Birmingham, 2014

Ward	Index Mean Value	Chinese Population of Ward (%)
Bordesley & Highgate	0.40	6.3
Ladywood	0.33	5.7
Edgbaston	0.21	4.7
Bournbrook & Selly Park	0.30	4.5
Nechells	0.42	3.0
Harborne	0.26	2.9
Weoley & Selly Oak	0.30	2.4
Pype Hayes	0.39	1.9

Source: Birmingham City Council.(15)

2.8.1 Access to Green Spaces

Green spaces are defined as "any area of vegetated land, urban or rural. This includes both public and private spaces." Examples of green spaces include parks, gardens, playing fields, wood and other natural areas.(238) Access to green spaces can contribute to a multitude of health and wellbeing benefits such as stress reduction, reduction in crime, increased physical health and reduction in UHI effect (***see section 2.8.4***).(239, 240)

Published research from 2019 investigated the access and use of local green spaces by Chinese international students in Edinburgh (n=186). The study found positive correlations between access to and use of green spaces and the self-reported wellbeing indicators e.g., perceived stress and general health. The key barriers identified when accessing green spaces included distance, lack of time, lifestyle, and lack of interest. The study also highlighted that the frequency of visits to green spaces was greatly impacted by perceived travel time.(241)

Birmingham has been named one of the greenest cities in Europe, with over 600 publicly accessible green and blue spaces across the city. Among Birmingham residents, 60% visit green spaces on a weekly basis, with 72% choosing to visit the green space closest to their home. However, there is an observed inequality in access to good quality green spaces across the city.(242)

The environmental justice map defines access to a green space as "within 1,000m and at least 2 hectares".(15) ONS data for 2020 provides insight into the average combined size of parks or public gardens and playing fields within 1,000m radius of residents by MSOA.(243) Encouragingly, all MSOAs in Birmingham have at least 2 hectares of combined green space within 1,000 metres; however, these two hectares may be split into smaller parks and playing fields. For example, in the Central MSOA, with a Chinese population of 455, the average size of the nearest green space is 0.57 hectares, below the definition for access to green space. However, this dataset does not indicate the size of the next nearest green space, which may meet the requirements listed above.(243)

2.8.2 Air Pollution

Air pollution is a major public health risk. A review by the WHO concluded that ambient (outdoor) air pollution can reduce life expectancy and cause premature deaths. In 2019, it was estimated that 37% of premature deaths caused by air pollution globally were due to increased incidence of ischaemic heart disease and stroke, 18% from COPD, 23% from acute lower respiratory infections and 11% from respiratory tract cancers.(244) The effects of air pollution disproportionately affect vulnerable communities such as children, pregnant people, older adults and those with pre-existing conditions.(245)

It is estimated that in Birmingham 900 deaths annually are linked to air pollution.(245) Additionally, OHID Public health data estimated that in 2021, 6.2% of mortalities in Birmingham were attributable to particulate air pollution. This is compared with 5.5% across England.(65)

2019 data from the IMD estimated the concentration of four main air pollutants: nitrogen oxide, benzene, sulphur dioxide and particulate matter across Birmingham. The overall pollution levels were

calculated and given an associated score. A higher score indicates a higher level of air pollution; across England scores range from 0.32 to 1.90.(16) In Birmingham, these scores ranged from 0.91 to 1.59. **Table 48** maps the 15 most polluted MSOAs in Birmingham and the corresponding Chinese population.

Table 48: Average air pollution by MSOA: Birmingham, 2020

MSOA	Pollution Score	Chinese Population (count)
Central	1.55	455
North Central and Dartmouth Circus	1.52	568
Nechells	1.51	87
Digbeth	1.49	800
Aston Park	1.48	41
Brookvale	1.47	88
Five Ways North	1.46	424
Ladywood – Summer Hill	1.45	37
Middlemore	1.45	9
Washwood Heath	1.45	238
Lozells East	1.42	46
Hockley & Jewellery Quarter	1.41	24
Attwood Green & Park Central	1.41	69
Saltley West	1.41	58
Perry Beeches East	1.41	477

Source: Ministry of Housing, Communities & Local Government.(16)

From this dataset it can be estimated that 27% of the Chinese community in Birmingham live in the 15 most polluted MSOAs in Birmingham. This is in comparison to approximately 5.4% of the White British population in Birmingham.(16)

2.8.3 Flood Risk

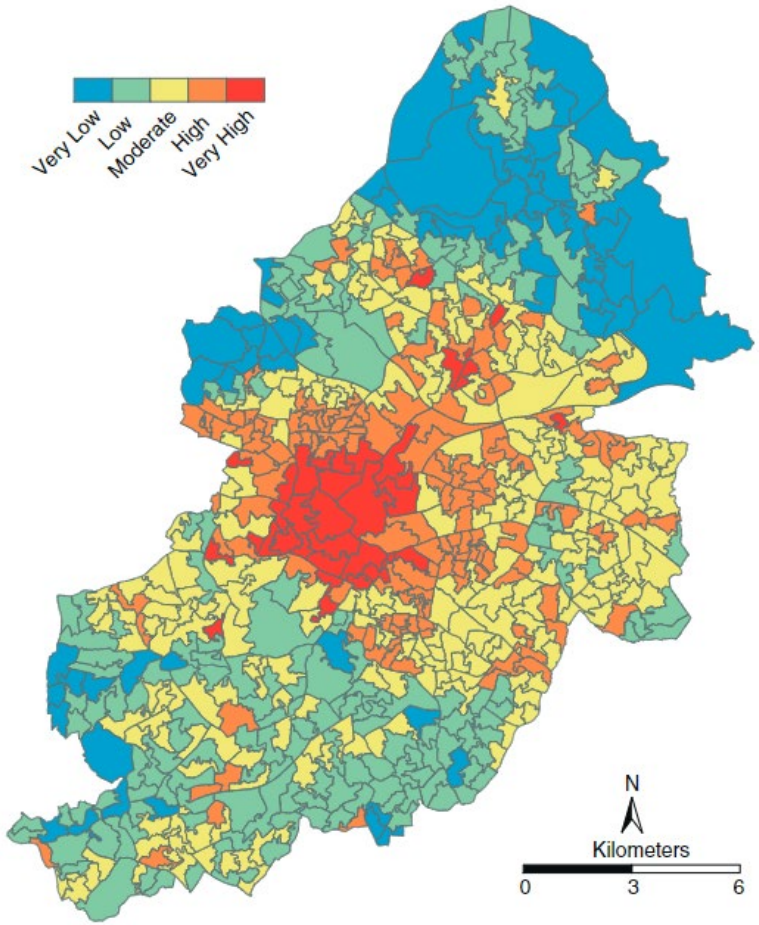
There is no data available on the flood risk associated with Chinese residents in Birmingham.

2.8.4 Urban Heat Island Effect

The UHI effect refers to areas of high building density, usually the cores of the cities, where temperatures are typically higher than the outer areas of the city. In Birmingham, for example, Sutton Park was recorded as having a surface temperature almost 8 degrees cooler than the city centre during a heatwave. During periods of extended high temperatures, such as heatwave conditions, the UHI can cause excess deaths of citizens in these areas. Some groups are more vulnerable to the UHI effect, including older adults, those with LTHCs, people living in high-rise buildings and in high density areas.(246)

A study from 2011 produced a spatially assessed heat-health risk map for Birmingham (**Figure 41**). By correlating this data to census data, it can be understood that there are high populations of the Chinese ethnic group located in the 'very high' risk areas e.g., Bordesley & Highgate, Ladywood, Nechells).(4) Therefore, the Chinese population in Birmingham is likely vulnerable to the UHI effect.

Figure 39: Spatially assessed heat-health risk: Birmingham, 2011



Source: Tomlinson *et al.,* Royal Meteorological Society.(246)

3. Closing the Gaps

There is some understanding of the intersectional experiences of Chinese people where ethnicity data is available alongside multivariate analysis. This data is typically found in the census, NHS digital data, DfE data etc. However, there are some limitations to fully understanding the health inequalities experienced by the Chinese community, with many reports grouping the Chinese ethnic group into various categories such as 'Asian', 'Other Asian', 'Other Ethnic groups'. The inconsistencies in ethnicity collection make it difficult to make clear conclusions about the health and wellbeing of the Chinese population.

Research included within this Community Health profile have suggested that intersectionality between Chinese ethnic identity and other minority identities, whether gender(6, 71, 106, 112), age(14, 141, 147, 245, 246), disability(10, 127) or migration status(75, 146, 181, 217), are associated with poorer health outcomes and it is important that this is explicitly considered in responding to this profile.

People from China or of Chinese ethnicity in the UK also face specific experiences of racism, such as Sinophobia, which was reported to be heightened during the COVID-19 pandemic, leading to increased amounts of hate crimes against Chinese individuals.(156) Chinese people may also experience discrimination based on other factors such as accent, English proficiency and religion. Experiences of racism and discrimination plays a role in the wider determinants of health and may also impact the access to an experience of healthcare services. To effectively tackle inequalities Chinese people may experience it is important to decrease discrimination and access to services to accurately map the Chinese populations experiences with health and wellbeing and how their health interacts with other aspects of their identity e.g., age, disability, sexual orientation and faith.

4. Conclusion

This Community Health Profile clearly demonstrates a significant breadth of health inequalities affecting Chinese people. Often, there has been limited data on the Chinese community living in Birmingham, so data has been reported at a national level.

At the heart of some of these inequalities are the impacts of discrimination and racism which impact on health behaviours, access to services and health outcomes. Sadly, much of the evidence demonstrates persistent and consistent inequalities, and often reflect the wider landscape of societal and environmental factors which influence health. The evidence also suggest that these inequalities are compounded by intersectionality e.g., Chinese people with a disability or LTHC often experience worse health outcomes than those without a disability.(127)

It is important to acknowledge that there are also positives highlighted in this report and that in some areas such as good educational outcomes(83, 84), low rates of obesity(7, 65) and low smoking prevalence(7) the evidence suggests that the Chinese population have more positive behaviours than other ethnic groups. However, these assets are overshadowed by the negative

inequalities, including higher rates of loneliness and isolation(14), high levels of exposure to air pollution(16), greater prevalence of Hepatitis B(13, 210, 211) and poor access to many healthcare services due to barriers faced.

The Community Health Profile provides an evidence summary for communities and partners to start to co-produce solutions and address these long-standing inequalities to create better environments and services to support the Chinese community to live healthier and happier lives.

5. Appendices

Appendix 1: Search Strategy

Note: removed 'China/' from search as this increased overall results to ~6700 as it included every study which had taken data from the UK and China that were mostly not relevant to Chinese people e.g., study on rivers/animals/plants

Medline search

#	Searches	Results
1	United Kingdom/	243966
2	United Kingdom.ab,ti.	44761
3	UK.ab,ti.	133198
4	Britain.ab,ti.	16586
5	England/	92840
6	England.ab,ti.	58020
7	West Midlands.ab,ti.	1558
8	Birmingham.ab,ti.	5794
9	Coventry.ab,ti.	511
10	Dudley.ab,ti.	428
11	Sandwell.ab,ti.	75
12	Solihull.ab,ti.	86
13	Walsall.ab,ti.	69

#	Searches	Results
14	Wolverhampton.ab,ti.	177
15	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14	462578
16	Chinese.ab,ti.	312188
17	Han.ab,ti.	23650
18	Zhuang.ab,ti.	1045
19	Hui.ab,ti.	1521
20	Manchu.ab,ti.	99
21	Uyghur.ab,ti.	624
22	16 or 17 or 18 or 19 or 20 or 21	323010
23	15 and 22	1838
24	limit 23 to (English language and yr="2012 -Current")	1045

Embase search

#	Searches	Results
1	United Kingdom/	404042
2	United Kingdom.ab,ti.	58306
3	UK.ab,ti.	271733
4	Britain.ab,ti.	23779
5	Great Britain/	4700
6	England/	35993
7	England.ab,ti.	76822

#	Searches	Results
8	West Midlands.ab,ti.	2443
9	Birmingham.ab,ti.	9443
10	Coventry.ab,ti.	825
11	Dudley.ab,ti.	626
12	Sandwell.ab,ti.	184
13	Solihull.ab,ti.	136
14	Walsall.ab,ti.	118
15	Wolverhampton.ab,ti.	352
16	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15	656228
17	Chinese/	76132
18	Chinese.ab,ti.	338419
19	Han.ab,ti.	24896
20	Zhuang.ab,ti.	1353
21	Hui.ab,ti.	2410
22	Manchu.ab,ti.	102
23	Uyghur.ab,ti.	742
24	17 or 18 or 19 or 20 or 21 or 22 or 23	358238
25	19 and 29	3180
26	Limit 30 to (English language and yr="2012 -Current")	1823

PsychInfo search

#	Searches	Results
1	United Kingdom.ab,ti.	11530
2	UK.ab,ti.	35590
3	Britain.ab,ti.	4596
4	England.ab,ti.	17937
5	West Midlands.ab,ti.	279
6	Birmingham.ab,ti.	778
7	Coventry.ab,ti.	79
8	Sandwell.ab,ti.	15
9	Dudley.ab,ti.	91
10	Solihull.ab,ti.	23
11	Walsall.ab,ti.	7
12	Wolverhampton.ab,ti.	30
13	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12	63915
14	exp Chinese Cultural Groups/	7401
15	Chinese.ab,ti.	48537
16	Han.ab,ti.	4569
17	Zhuang.ab,ti.	61
18	Hui.ab,ti.	449
19	Manchu.ab,ti.	13

#	Searches	Results
20	Uyghur.ab,ti.	80
21	14 or 15 or 16 or 17 or 18 or 19 or 20	52793
22	13 and 21	571
23	limit 22 to (English language and yr="2012 -Current")	334

Web of Science search

#	Search terms	Results
1	(TS=(UK) OR TS=(United Kingdom) OR TS=(Britain) OR TS=(England) OR TS=(West Midlands) OR TS=(Birmingham) OR TS=(Coventry) OR TS=(Dudley) OR TS=(Sandwell) OR TS=(Solihull) OR TS=(Walsall) OR TS=(Wolverhampton))	588,191
2	(TS=(Chinese) OR TS=(Han) OR TS=(Zhuang) OR TS=(Hui) OR TS=(Manchu) OR TS=(Uyghur))	569,779
3	#2 AND #1	4,040
4	#2 AND #1 and 2023 or 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 or 2014 or 2013 or 2012 (Publication Years) and English (Languages)	2,740

Appendix 2: Exclusion and Inclusion Criteria

Age group	Language	Publication type	Availability	Time limit
Any	English Language	Pieces of peer reviewed and high-quality grey literature, academic or scientific literature, whether a journal or article, report or documents relating to the specified health and wider determinants issues amongst the Chinese community in the UK. Publications exclusive to people from the Chinese community. Publications with at least 50% of Chinese community population sample representation.	All articles including DOI/HTML links. Graphs and figures reproduction depends on copyright.	Searches should be run restricting to articles published in the last 10 years, not including 2011 census and 2001 census. If trend data is presented in papers published from 2012 onwards, this can be used. Justification should be provided for using data from more than 10 years ago.

Appendix 3: Abbreviations

AHC	After housing costs
aOR	Adjusted odds ratio
APS	Annual Population Survey
BCSP	Bowel Cancer Screening Programme
BHC	Before housing costs
BMI	Body Mass Index
BSOL ICS	Birmingham and Solihull Integrated Care System
BTEC	Business and Technology Education Council
CHD	Coronary heart disease
CI	Confidence interval
CMO	Chief Medical Officer
COPD	Chronic Obstructive Pulmonary Disease
COVID-19	Coronavirus disease caused by SARS-CoV-2 virus
CVD	Cardiovascular disease
DFLE	Disability-free life expectancy
DJG	De Jong Gierveld scale
DTap/IPV/Hib	Diphtheria, tetanus, pertussis, polio, and Haemophilus influenzae type b
EHC	Education, Health and Care plan
EYFS	Early Years Foundation Stage
FSM	Free school meals
GCSE	General Certificate of Secondary Education
GPPS	GP Patient Survey
HBsAg	Hepatitis B surface antigen
HBV	Hepatitis B
HESA	Higher Education Statistics Agency
HPV	Human Papillomavirus
HSE	Health Survey for England
IDACI	Income Deprivation Affecting Children Index
IMD	Index of Multiple Deprivation
IoD	Indices of Deprivation
LFS	Labour Force Survey
LGBTQ+	The acronym for lesbian, gay, bisexual, trans, queer, and other sexual orientations and gender identities.
LTHC	Long-term health condition
MBRRACE-UK	Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK
MHCLG	Ministry of Housing, Communities and Local Government
MSK	Musculoskeletal
MSOA	Middle Super Output Area
NEET	Not in employment, education or training
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
OHID	Office for Health Improvement & Disparities

ONS	Office for National Statistics
OR	Odds ratio
PHE	Public Health England
RR	Risk ratio
SEN	Special Educational Need
STI	Sexually transmitted infection
TA	Teacher assessments
TB	Tuberculosis
TFR	Total Fertility Rate
UHI	Urban Heat Island
UTLA	Upper Tier Local Authority
WEMWBS	Warwick-Edinburgh Mental Wellbeing Scale
WHO	World Health Organisation
YLL	Years of Life Lost
zBMI	Standardised Body Mass Index

Appendix 4: Birmingham and National Chinese Organisation Contact Details

Organisation Name	Target Audience	Contact Information
Birmingham Public Health Communities Team	All Birmingham based communities	communitiesteam@birmingham.gov.uk Email us to sign up to our mailing list to get all the latest updates on community health profiles and engagement opportunities If you are an organisation who works with the Chinese community in Birmingham, please email us to add your organisational details to this table.

Appendix 5: Data Tables

Appendix 5.1: Country of birth among people identifying as 'Asian or Asian British: Chinese': Birmingham, 2021

Country of Birth	Chinese (count)
Middle East and Asia	9146
England	3071
Europe: Other Europe	59
The Americas and the Caribbean	57
Europe: United Kingdom: Wales	47
Europe: United Kingdom: Northern Ireland	35
Europe: United Kingdom: Scotland	26
Africa	24
Europe: Ireland	11
Antarctica and Oceania (including Australasia)	11

Source: Office for National Statistics, 2021 census (33)

Appendix 5.2: Arrival of Asian/Asian British Chinese population to the UK by sex: Birmingham, 2021

Year of Arrival	Males	Females	Total
Before 1981	422	449	871
1981 to 2000	642	701	1,343
2001 to 2010	863	1,135	1,998
2011 to 2021	2,184	2,910	5,094

Source: Office for National Statistics, 2021 census (32)

Appendix 5.3: Distribution of the Chinese diaspora: England and Wales, 2021

Region	Population	Chinese (%)
London	147,520	33
South East	64,329	14
North West	54,051	12
East of England	38,444	9
West Midlands	33,301	8
Yorkshire and The Humber	29,589	7
South West	26,516	6
East Midlands	22,973	5
Wales	14,454	3
North East	14,442	3

Source: Office for National Statistics. TS022, census 2021 (4)

Appendix 5.4: Distribution of Chinese diaspora by Local Authority (LA): England, 2021

LA	Population	Population (% of LA)
Manchester	12,644	2.3
Birmingham	12,487	1.1
Tower Hamlets	10,279	3.3
Barnet	9,434	2.4
Liverpool	8,841	1.8

Source: Office for National Statistics. TS022, census 2021 (4)

Appendix 5.5: Age profile of Chinese and White British populations: Birmingham, 2021

Age	Chinese (%)	White British (%)
4 and under	4.3	4.5
5 to 9	5.4	5.0
10 to 15	6.1	5.9
16 to 19	5.1	4.8
20 to 24	19.1	7.4
25 to 29	10.7	6.6
30 to 34	9.3	6.6
35 to 39	8.5	5.8
40 to 44	7.7	5.2
45 to 49	5.6	5.7
50 to 54	4.3	7.1
55 to 59	4.2	7.4
60 to 64	3.2	6.6
65 to 69	2.3	5.6
70 to 74	1.5	5.6
75 to 79	1.0	4.3
80 to 84	0.9	2.9
85 and over	0.9	3.1

Source: Office for National Statistics. 2021 census (42)

Appendix 5.6: Religious affiliation of the Chinese community: Birmingham, 2021

Religion	Chinese (%)
No religion	63.6
Christian	16.2
Religion not stated	10.1
Buddhist	9.0
Muslim	0.6
Other	0.4
Hindu	0.1
Jewish	0.1
Sikh	0.1

Source: Office for National Statistics. Census 2021 (44)

Appendix 5.7: National Identity among the Chinese population: Birmingham, 2021

National Identity	Chinese (count)	Chinese (%)
British only	5,797	46
Other only	5,774	46
Other and at least one UK	514	4
English only	180	1
English and British only	179	1

Source: Office for National Statistics. Census 2021 (45)

Appendix 5.8: Percentage of live births to mothers born in China: West Midlands Upper Tier Local Authorities, 2012 to 2014

UTLA	Live births in UTLA (%)
Dudley	0.24
Shropshire	0.21
Solihull	0.30
Staffordshire	0.25
Stoke on Trent	0.50
Telford & Wrekin	0.25
Warwickshire	0.32

Source: Public Health England. Infant and Perinatal Mortality in the West Midlands (63)

Appendix 5.9: Infant mortality rate (per 1,000 live births) by cause of death and ethnicity of the baby: England and Wales, 2017 to 2019

Ethnic Group	Immaturity Related Conditions	Congenital Anomalies	Other
White British	1.3	0.9	0.9
Any other Asian background	2	1.5	1
Indian	2.2	1.3	1
Bangladeshi	1.8	2.3	1
Pakistani	2	3.4	1.3

Source: Office for National Statistics (64)

Appendix 5.10: Overweight and obesity prevalence within the Chinese ethnic group by Income Deprivation Affecting Children Index (IDACI) and sex in Reception: England, 2015 to 2017 combined

Deprivation Quintile	Obesity, girls (%)	Obesity, boys (%)
1 (most deprived)	15	14
2	17	14
3	13	14
4	11	12
5 (least deprived)	11	9

Source: Strugnell C *et al.,* (71)

Appendix 5.11: Overweight and obesity prevalence within the Chinese ethnic group by Income Deprivation Affecting Children Index (IDACI) and sex in year 6: England, 2015 to 2017 combined

Deprivation Quintile	Obesity, girls (%)	Obesity, boys (%)
1 (most deprived)	24	33
2	23	34
3	17	29
4	17	25
5 (least deprived)	12	26

Source: Strugnell C *et al.,* (71)

Appendix 5.12: Dental decay at 5-years-old by ethnic group: England, 2017

Ethnic group	Obvious tooth decay (%)
Eastern European	49
Chinese	**42**
Other Ethnic Group	41
Asian/Asian British	36
Mixed	23
White	21
Black/Black British	20
Total Population	23

Source: Public Health England, National Dental Epidemiology Programme for England (5)

Appendix 5.13: Children living in low-income households (BHC) by ethnic group: UK, 2016 to 2018

Ethnicity	Children Living in Low-Income Households (%)
Pakistani	47
Chinese	**31**
Asian Other	24
White British	17
Indian	17

Source: Office for National Statistics using data from the Family Resource Survey (76)

Appendix 5.14: Percentage of girls meeting expected development levels by ethnicity: Birmingham, 2018 to 2019

Ethnic Group	Meeting Expected Development Levels (%)
Mixed	76
Asian	75
Black	75
White	74
Chinese	**70**

Source: Department for Education (6)

Appendix 5.15: Percentage of boys meeting expected development levels by ethnicity: Birmingham, 2018 to 2019

Ethnic Group	Meeting Expected Development Levels (%)
Chinese	**79**
Mixed	62
White	60
Asian	59
Black	58

Source: Department for Education (6)

Appendix 5.16: Key stage 1 pupils meeting the expected standards in reading, writing, maths, and science by ethnic group: England, academic year 2021 to 2022

Ethnic Group	Reading (%)	Writing (%)	Maths (%)	Science (%)
All pupils	67	58	68	77
White British	68	57	68	79
Chinese	**78**	**73**	**88**	**86**

Source: Department for Education (81)

Appendix 5.17: Key stage 2 attainment of Chinese pupils by sex: England, academic year 2021 to 2022

Subject(s)	Total (%)	Boys (%)	Girls (%)
Reading, writing, maths (combined)	70	66	74
Science	83	82	85
Grammer, Punctuation, Spelling	85	83	87

Source: Department for Education (82)

Appendix 5.18: Progress 8 score by ethnicity: Birmingham, academic year 2018 to 2019

Ethnic Group	Progress 8 Score
Chinese	**1.04**
Asian	0.26
Black	0.07
Mixed	-0.07
White	-0.12

Source: Source: Office for National Statistics (76)

Appendix 5.19: Age standardised WEMWBS scores by sex and ethnic group: England, 2019

Gender	Chinese	White British
Men	50.8	51.1
Women	52.3	50.9
Average	51.5	51

Source: NHS Digital, Health Survey for England (7)

Appendix 5.20: Alcohol consumption at least once per week by ethnic group and sex: England, 2011 to 2019

Gender and Ethnicity	Drinks alcohol at least once per week (%)
Chinese Male	29
Chinese Female	19
White British Male	64
White British Female	49

Source: NHS Digital, Health Survey for England (7)

Appendix 5.21: Smoking prevalence amongst the Chinese ethnic group by sex: England, 2021

Gender	Current Smokers (%)	Ex-smokers (%)	Never Smoked (%)
Male	9	11	80
Female	2	8	90

Source: Source: Office for National Statistics.(106)

Appendix 5.22: Percentage of 16- to 74-year-olds who reported being victims of domestic abuse in the previous 12 months, by ethnicity: England and Wales, 2017 to 2020

Ethnicity	2017 to 2018 (%)	2018 to 2019 (%)	2019 to 2020 (%)
Chinese	N/A	2.1	2.0
Other Asian	3.7	5.2	3.1
White British	5.6	5.9	5.9

Source: Crime Survey for England and Wales (112)

Appendix 5.23: Percentage of adults aged 16 years and over who are eating '5-a-day', by ethnicity: England 2021 to 2022

Ethnicity	Eating '5 a day' (%)
Other	31
White Other	31
White British	34
Mixed	30
Chinese	26
Black	20
Asian	21
All	33

Source: Active Lives Survey (117)

Appendix 5.24: Weight category among men by ethnic group: England, 2011 to 2019

Ethnicity	Normal Weight (%)	Overweight or Obese (%)	Underweight (%)
Chinese	60	36	4
White British	31	67	2

Source: NHS Digital. Health Survey for England (7)

Appendix 5.25: Weight category among women by ethnic group: England, 2011 to 2019

Ethnicity and Gender	Normal Weight (%)	Overweight or Obese (%)	Underweight (%)
Chinese	76	22	2
White British	39	59	2

Source: NHS Digital. Health Survey for England (7)

Appendix 5.26: Chinese population who are physically active by sex, socioeconomic status, and disability or LTHC: England, 2020

Chinese Population Subgroups	Physically Active (%)
Male	61
Female	59
High social grade	66
Low social grade	46
Disability or LTHC	44
No disability or LTHC	61

Source: Sport England. Active Lives Survey (127)

Appendix 5.27: Proportion of the Chinese population who are physically active by sex and socioeconomic status: England, 2020

Socioeconomic Status	Males Physically Active (%)	Females Physically Active (%)
Low socioeconomic status	42	48
High socioeconomic status	71	61

Source: Sport England. Active Lives Survey (127)

Appendix 5.28: Perceptions regarding physical activity by ethnic group and 'Agree or Strongly Agree' response categories: England, 2020

Perception	Chinese (%)	White British (%)
I feel that I have the ability to be physically active	88	82
It's important to me to do sport/exercise regularly	86	75
I find sport/exercise enjoyable and satisfying	76	71

Source: Sport England. Active Lives Survey (9)

Appendix 5.29: Highest level of qualification by ethnic group: Birmingham, 2021

Ethnic Group	None (%)	Level 1 (%)	Level 2 (%)	Level 3 (%)	Level 4+ (%)
Average	24	10	13	17	30
White British	23	10	13	19	27
Chinese	18	6	5	11	55

Source: Office for National Statistics, census 2021 (141)

Appendix 5.30: Economic activity by ethnic group: Birmingham, 2021

Ethnic Group	Employed (%)	Unemployed (%)
Chinese	46	4
White British	50	4
Birmingham	50	6

Source: Office for National Statistics, census 2021 (141)

Appendix 5.31: Economic inactivity by ethnic group: Birmingham, 2021

Economic Inactivity	Chinese (%)	White British (%)	Birmingham (%)
Student	29	7	10
Looking after home or family	7	4	8
Long-term sick or disabled	1	6	5
Retired	9	24	16
Other	4	4	5

Source: Office for National Statistics, census 2021 (141)

Appendix 5.32: Housing tenure by ethnic group: Birmingham, 2021

Housing Tenure	Chinese (%)	White British (%)	Birmingham (%)
Owned: Owns outright	24	29	27
Owned: Owns with a mortgage or loan or shared ownership	32	32	26
Rented: Private or rent free	35	24	23
Rented: Social rented	9	20	19

Source: Office for National Statistics, census 2021 (141)

Appendix 5.33: Self-assessed 'bad or very bad' general health by ethnic group and age: Birmingham, 2021

Ethnic Group	65 to 69	70 to 74	75 to 79	80 to 84	85 and over
Chinese (%)	6	9	14	18	25
White British (%)	13	13	16	18	24

Source: Office for National Statistics, census 2021 (141)

Appendix 5.34: Self-reported limiting disability by ethnic group: Birmingham, 2021

Ethnic Group	Disabled, limited a little (%)	Disabled, limited a lot (%)
Chinese	4	2
White British	11	13
Birmingham Average	10	10

Source: Office for National Statistics, census 2021 (141)

Appendix 5.35: COVID-19 vaccination rates of adults aged 50 years and over, by self-reported ethnic group: England, December 2020 to December 2021

Ethnic Group	Received 2 or 3 COVID-19 vaccines (%)
White British	95
Indian	94
Bangladeshi	91
Chinese	**88**
Pakistani	86
Black Caribbean	72

Source: Office for National Statistics, National Immunisation Management Service (199)

Appendix 5.36: Percentage of peopled aged 65 and over from Chinese and White British ethnic groups compared with the National average: Birmingham, 2021

Age	Chinese (%)	White British (%)	Birmingham Average (%)
65 to 69	2.3	5.6	3.7
70 to 74	1.5	5.6	3.3
75 to 79	1.0	4.3	2.4
80 to 84	0.9	2.9	1.8
85 and over	0.9	3.1	1.9

Source: Office for National Statistics, census 2021 (42)

Appendix 6: Additional Datasets

Appendix 6.1 Standardised number of detentions under the Mental Health Act per 100,000 people, by individual ethnic group: England, 2021 to 2022

Ethnic Group	Number of detentions (per 100,000 people)
Black Other	760
Other Ethnic groups	492
Mixed Other	406
Black African	281
Black Caribbean	281
Mixed White and Black African	210
Mixed White and Black Caribbean	194
Bangladeshi	152
White Other	149
Asian other	140
Pakistani	129
Mixed White and Asian	104
Indian	75
White British	69
Chinese	**64**
White Irish	62

Source: NHS Digital

Appendix 6.2 Number of people per 100,000 using NHS mental health, learning disability and autism services, by specific ethnic group: England, 2020 to 2021

Ethnic Group	Number of detentions (per 100,000 people)
Other Ethnic groups	19,239
Mixed Other	16,092
Black Other	11,602
White Other	5,764
Mixed White and Black African	5,268
Mixed White and Black Caribbean	5,139
Black Caribbean	5,068
Bangladeshi	4,562
Pakistani	4,364
Asian other	4,088
White British	4,041
Black African	3,900
White Irish	3,772
Mixed White and Asian	3,557
Indian	2,705
Chinese	**1.631**

Source: NHS Digital

6. Acknowledgments

Authors:

Jordan Francis, Public Health Officer, Birmingham City Council

The development of the Chinese Community Health Profile was greatly assisted by the following people:

Joseph Merriman, Senior Officer, Birmingham City Council

Rhys Boyer, Senior Officer, Birmingham City Council

Alice Spearing, Senior Officer, Birmingham City Council

Sara Croxford, Public Health Registrar, Birmingham City Council

Shazia Ahmed, Public Health Officer, Birmingham City Council

Alex Robinson, Public Health Officer, Birmingham City Council

Contributors:

Dr Justin Varney, Director of Public Health, Birmingham City Council

Helen Harrison, Assistant Director of Public Health Birmingham City Council

Ricky Bhandal, Service Lead, Birmingham City Council

Cristina Osborne, Public Health Registrar, Birmingham City Council

Dr Katy Town, Independent Academic Reviewer

Hannah Thomas, Senior Officer, Birmingham City Council

Leah Bedwin, Student Placement, University of Birmingham

Obinna Eboh, Student Placement, University of Wolverhampton

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