

Sikh Community

Health Report

Date: May 2021



Making a positive difference every day to people's lives



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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 short 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 behavioural and wider determinants of health-related issues that are affecting the specific community both 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 10 key priority areas identified in the Health and Wellbeing Strategy for Birmingham 2021
- 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.

Executive summary (infographic)

The Sikh Community Health Report identifies and summarises the national and local evidence concerning the health, lifestyle behaviours and wider determinants of health that affect Sikh Communities.

Sikhism is a religion founded by Guru Nanak Dev Ji in the 16th century in Punjab province (now in India and Pakistan after partition). There are more than 20 million Sikhs in the world, most of whom live in Punjab, India. Most of the British Sikhs immigrated in the 1950s and 1960s from Punjab, India, to seek work in British industries like foundries and textiles for a better life, or later from East Africa due to increasing Indophobia in Africa and better economic prospects in the UK.

Sikhism is the second largest religious minority group in Birmingham and accounted for just under 32,380 people in the 2011 Census, approximately 3% of the population. There was a small increase between the 2001 and 2011 Census.

Reflecting on the international picture, most of the Sikh population of Birmingham are from Indian ethnic communities. The highest density of Sikh citizens is in Handsworth Wood and Soho & Jewellery Quarter wards of the city.

There are 23 Sikh Gurdwara's and temples, approximately 6 leading community organisations, 7 media radio stations and 3 media television stations focusing specifically on the Sikh community in Birmingham.

There is very limited evidence or data on health inequalities for faith communities and this has been demonstrated in the evidence collation for this summary report.

The key health inequalities identified in the evidence are:

- Higher prevalence of polycystic Ovary Syndrome, cardiovascular diseases and diabetes compared to the general population (recognising lack of faith specific evidence)
- Evidence of high prevalence of alcohol drinking and alcohol related issues, such as Liver cirrhosis
- Lower uptake levels across different cancer screening programmes
- Low levels of physical activity, particularly among women, with culture and family expectations being highlighted in research as barriers

- Qualitative literature consistently highlighting the lower levels of awareness on the causes and disease management among patients with long term illness
- Across the literature there are consistent themes about the lack of cultural sensitivity and language barriers (recognising this is not faith specific)

1. Methodology

An exploratory search was undertaken by the Public Health Communities team using a range of databases such as National Data Sources, NOMIs and PubMed to identify information on Sikh communities for this report. Keyword search terms and subject headings relevant to the themes were identified. All references used within this report are outlined in the References section.

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

A. National data sources

NOMIS data: data were extracted by religion from the 2011 Census:
<https://www.nomisweb.co.uk/>

National Public Health (PHE fingertips) and government data sources (ons.gov.uk and gov.uk) – where relevant Sikh community-level data were available

National voluntary and community sector reports identified through Google Scholar and national websites – where relevant Sikh community-level data were available:

Alzheimer's Research UK (<https://www.alzheimersresearchuk.org/>)

The British Heart Foundation (<https://www.bhf.org.uk/>)

The British Lung Foundation (<https://www.blf.org.uk/>)

The British Sikh Report (<https://britishsikhreport.org/>)

Cancer Research UK (<https://www.cancerresearchuk.org/>)

Diabetes UK (<https://www.diabetes.org.uk/>)

The Joseph Rowntree Foundation (<https://www.jrf.org.uk/>)

Mind (<https://www.mind.org.uk/>)

Sport England (<https://www.sportengland.org/>)

The Cochrane database was searched using the terms Sikh and Sikhism

B. PubMed search

In addition, a PubMed search (<https://pubmed.ncbi.nlm.nih.gov/>) was performed using the key words “Sikh” and “Sikhism”. 259 results were found, 165 of these from the year 2000 onwards. These were screened for relevance to this profile.

C. Grey Literature

Where information sources had not been identified through A or B, further searching through Google, Google scholar and PubMed using topic specific search terms was carried out. Papers that were relevant to the UK were included i.e. data and information stemming from local or national-level reports and/or surveys. 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 English population.

Collected papers were used to collate sources from other additional relevant resources to add to the knowledge base. Generally, searches were limited to the year 2000 onwards but where information was scarce some older information was occasionally used.

D. Service Data Sources

Where information was not clear on whether a certain health topic or lifestyle behaviour was an issue, not an issue or a hidden issue, further research was done using local expert knowledge/opinion. Change Grow Live (CGL), a local substance misuse provider engaged with and submitted a report from experts in Birmingham (Addiction psychiatry Queen Elizabeth Hospital (QEH), liver clinic (CGL) hospital based, Consultant physician from QEH; Homeless pathway team Non-medical Prescriber (NMP) from the homeless pathway team; team lead from CGL safeguarding; and Local Sikh substance misuse organisation KIKIT) (**Appendix 3**)

E. Data consolidation and analysis

Results retrieved from the initial searches were reviewed by the Public Health Communities team against the inclusion and exclusion Criteria (**Appendix 1**). The Team used a ‘concept table’ to frame the theme and identify key words for searches (**Appendix 2**). The articles utilised in this document were then analysed, identified and cross referenced with other themes throughout the report.

2. Introduction

2.1. Overview of the Sikh Religion

Sikhism is a religion founded in 16th century in Punjab province (now in India and Pakistan after partition). Guru Nanak Dev Ji (20 October 1469 - 7 May 1539) is the founder of Sikhism and the first of the ten Sikh Gurus. He was born in the village of Talwandi, now called Nankana Sahib, near Lahore in present-day Pakistan. Guru (meaning preacher or teacher) told his followers that any person can connect with God and stop practicing falsehoods. He instituted a common meal (Langar) which continues to this day, requiring the rich and poor; different religions; genders, high caste and low caste, to sit together while eating demonstrating equality for all. There were 10 human Gurus altogether and just before the death of the 10th, Guru Gobind Singh, transferred the spirit of the eternal Guru to the sacred scripture of Sikhism, The Guru Granth Sahib.

- Guru Nanak (1469 – 1539)
- Guru Angad (1539 - 1552)
- Guru Amar Das (1552 - 1574)
- Guru Ram Das (1574 - 1581)
- Guru Arjan (1581 - 1606)
- Guru Hargobind (1606 - 1644)
- Guru Har Rai (1644 - 1661)
- Guru Har Krishan (1661 - 1664)
- Guru Tegh Bahadur (1665 - 1675)
- Guru Gobind Singh (1675 - 1708)
- Guru Granth Sahib (Present Guru)

Sikhs practice their faith in the Gurdwaras (a Sikh place of Worship) and at home. Sikh practices within the religion include prayer, meditation, Guru Granth Sahib ceremonies and festivals with a particular focus on Vaisakhi which is an initiation of a full baptised Sikh joining the Khalsa (The Pure). The Gurdwara is a pivotal and important hub within the Sikh community not only to pray to the Guru but also from a community education

point. It was the Gurus philosophy that Sikhs should learn all around them and open their minds to literature, poetry, nature, religion and warrior practices (Shastar Vidya). At the Gurdwara the Guru Granth Sahib Ji is read constantly and hymns are sung in chorus by worshippers. Prayers are said, sweet pudding (Prashad) is served in the whole congregation and free food (langar) is distributed and offered to all. There are some key focal points of when the Sikh Community come regularly:

- Vaisakhi April 13th – Falls on the month of Vaisakh and marks the birth of the Khalsa (the Pure). The Khalsa was born and Sikhs were given a clear identity and a code of conduct to live by. Sikh devotees generally attend the Gurdwara throughout the day with offerings in their hands. Across the world and the UK, people come together for a public parade (Nagar Kirtan) displaying unity with The Guru Granth Sahib at the front leading the way.
- Gurpurbs- these are festivals when Sikhs celebrate the birth and death of a Guru.

Pilgrimage is not compulsory for Sikhs; Sikhs believe in helping all which includes financially and should dedicate at least 1/10th of their money to good causes called Vand Chhakna (charity) or Sewa (volunteer work) to help others. Sewa is a fundamental part of Sikhs as this selfless service demonstrates active participation in humility and serving others such as Langar (food) for example. Sikhs who go on a pilgrimage often visit important sites in India, Pakistan and Punjab, where Sikhism was founded. Many Sikhs believe that there are various benefits of pilgrimage which include:

- Allows time to be dedicated to spiritual reflection and strengthens Sikh's faith
- Enables Sikhs to learn more about the history of Sikhism and the Gurus' lives
- Visit historical sites of significance
- Helps to better understand the principles of Sikhism
- Connecting young Sikhs with their faith

A Sikh can be baptised at any age and be part of the Khalsa. They are given a new identity and will keep on their person the five Ks, namely Kesh, Kanga, Kacchera, Kara and Kirpan:

- Kesh is uncut hair and beards which they take pride in, as a mark of holiness and submission to God's will and symbolizes adoption of a simple life and denial of one's pride.
- Kanga is a small wooden comb they keep in their hair as a sign of cleanliness.
- They wear a Kacchera, which is small cotton underwear that serves as a symbol of chastity.
- Kara is a steel bracelet that serves as a reminder that they are connected to God and a symbol of restraint and gentility.
- Kirpan is a ceremonial steel sword that is kept in a sheath and can be worn over or under clothing. It symbolizes spirituality and the protection of others and oneself.

Sikhs run Langar (free kitchen introduced by Guru Nanak) in every gurdwara, and some serve it to people outside the Gurdwara often to the homeless or vulnerable people. Free meals are offered to everyone, regardless of their caste, gender, wealth or faith to show their belief in the oneness of humanity. Some features of the langar and why it is important are:

- It is run by volunteers, who can be male or female, old or young
- It is seen as a privilege to help with the running of the langar. There is usually a waiting list of people who want to provide the langar each week because they want to serve God
- The langar serves vegetarian food in accordance with the Sikh faith which make it inclusive to all faiths

Sikh community's culture often has blurred lines with the Punjabi community which has strong stereotypes about food, drinking, music, bhangra (dance), traditional clothes, social events, Gurdwara (Sikh temple) and political situation in Punjab. Some elements of culture such as the caste system are predominately linked to Punjabi culture but have implications in the practice of faith. The Punjabi / Sikh culture has always been a controversial area in terms of identity however in this report it is important that the data used from individuals who identify themselves as Sikh. Behaviours such as drinking alcohol, eating meat and smoking for are strictly forbidden in the Sikh faith.

2.2. International Context

India is the birthplace of Sikhism. There are more than 22 million Sikhs in the world, 90% live in India.⁽¹⁾ Sikhism is the fourth largest religion in India and is concentrated in the state of Punjab. Canada has the 2nd largest Sikh population in the world, with 468, 670 Sikh residents, followed by the UK at 342,429 Sikhs. Other countries with significant Sikh populations include the US, Australia, Malaysia, Kenya and Uganda.

2.3. National Context

Most of the British Sikhs immigrated in the 1950s and 1960s from Punjab, India, to seek work in British industries like foundries and textiles for a better life, or later from East Africa due to increasing Indophobia in Africa.⁽²⁾

However, due to racial tensions in the UK some of the immigrants in the 1950's removed their outward religious symbols (turbans, long hair and beards) to avoid racial prejudices and increase their job prospects.⁽²⁾

Issues within the UK's Sikh community include hate crime, employment discrimination, sexual grooming,⁽³⁾ language and cultural barriers and concerns regarding injustice for Sikhs in India.

The Sikh contribution to British society includes Seva (service to humanity). Many Sikhs and Gurdwaras in the UK and Birmingham contribute largely to charitable events, such as serving the langar (free food kitchen) to those in need.^{(4),(5)}

In addition, thousands of Sikhs fought and died for Britain during World War I and 2 with their contributions were only recognised recently.^{(6),(7)} after extensive campaigning from the community.

According to the 2011 census,⁽⁸⁾ 420,196 people in England identify themselves as Sikhs and are the third largest minority religious group in the country (2%). Across England and Wales, a large proportion of the Sikh population are in the younger age group (35% are 0-24 years) and working age group (42% are 25-49 years)

London is home to the largest Sikh community in the UK. 150,000 people identify as Sikhs, with some of the largest demographics in Ealing (26,778), Hillingdon (18,230), Hounslow (22,749) and Redbridge (17,377). Outside London, 10% of the population

in Wolverhampton identify as Sikh (22689); 10.6% of the population in Slough identify as Sikhs (14,889).⁽⁹⁾

2.4. Birmingham Context

Over half (52%) of Sikhs arrived in Britain before 1981 and the numbers have continued to fall over more recent periods of arrival.⁽¹⁰⁾ Initially they mainly settled in London, Birmingham and West Yorkshire.⁽²⁾ When immigrating to Birmingham, Sikhs often lived with their extended families in areas like Spark Hill, Handsworth and Aston and mainly worked in foundries. However, as they became socially and economically affluent, they gradually started to live-in single-family households and move to the suburbs of Birmingham and the population is now dispersed over a much larger footprint of the City.

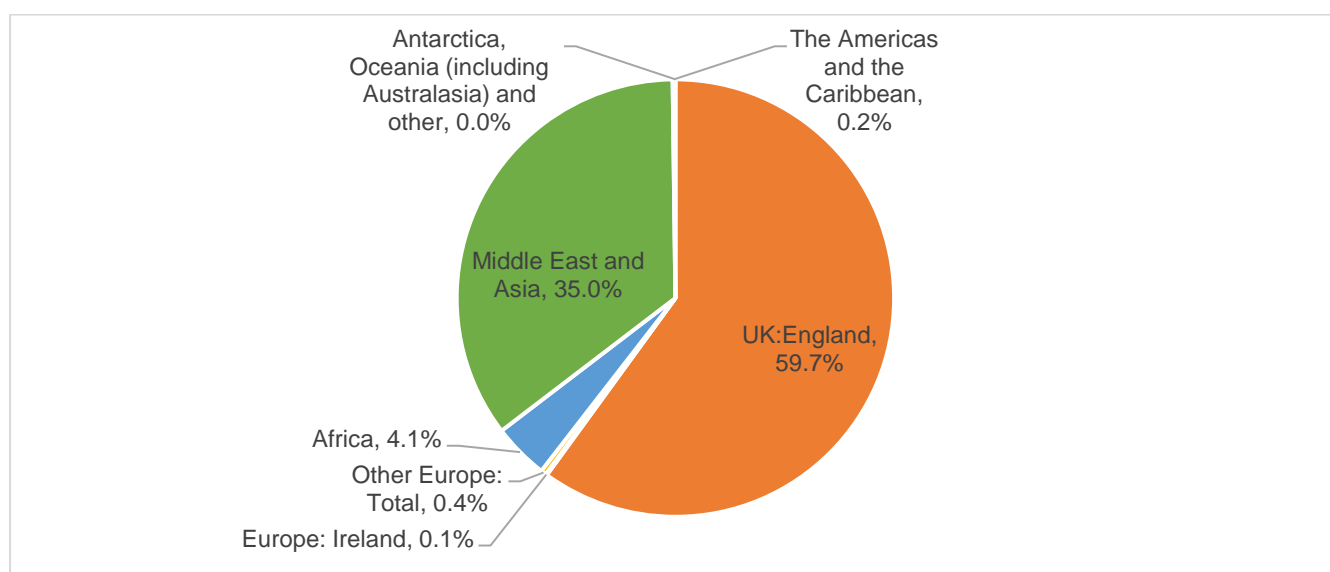
The 2011 UK census from the ONS reported the following:⁽⁸⁾

- 133,681 people identify themselves as Sikh in the West Midlands
- 32,376 people identify themselves as Sikh in Birmingham and Sikhism is the second largest minority religious group in the city (3%)
- The rise in the number of people identifying themselves as Sikhs between 2001 and 2011 in Birmingham was minimal (increased from 2.9% to 3.0 %)

Figure 1, below illustrates that nearly 60% of Birmingham's Sikhs had been born in England, 35% in the Middle East or Asia and 4% in Africa.^a A small percentage reported being born in Ireland, other Europe, the other Americas and Antarctica (less than 1% each).

^a ONS Nomis LC2207EW- Country of birth by religion by sex

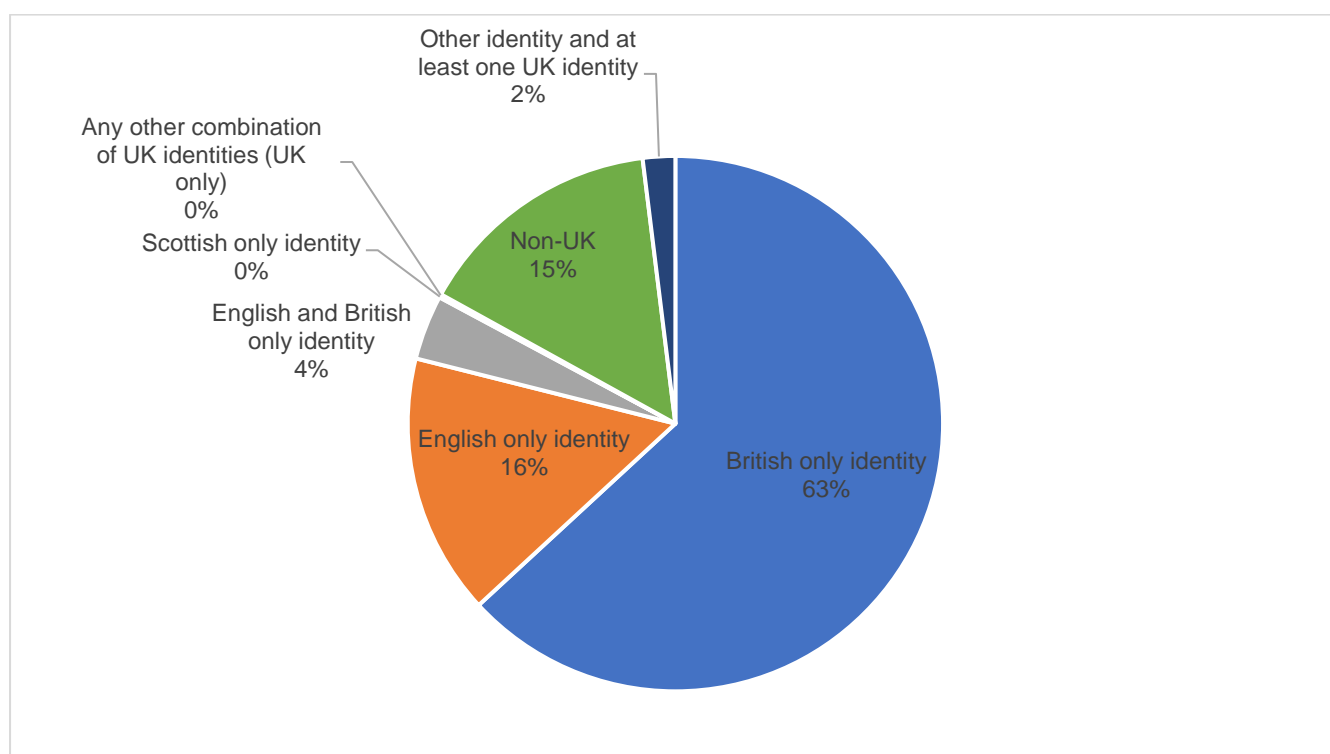
Figure 1: Country of birth for Sikhs in Birmingham



Source: Census 2011 ONS: LC2207EW

Figure 2 below illustrates that of the 32,376 Sikhs in Birmingham, 20,421 (63.1%) identify as British; 5104 (15.8%) identify as English and British; 4856 (15%) identify as Non-UK; 634 (2%) identify as other and at least one UK identity; a small percentage identify as either Scottish or other combination of UK identities (0.1% each).

Figure 2: National Identity of Sikhs in Birmingham

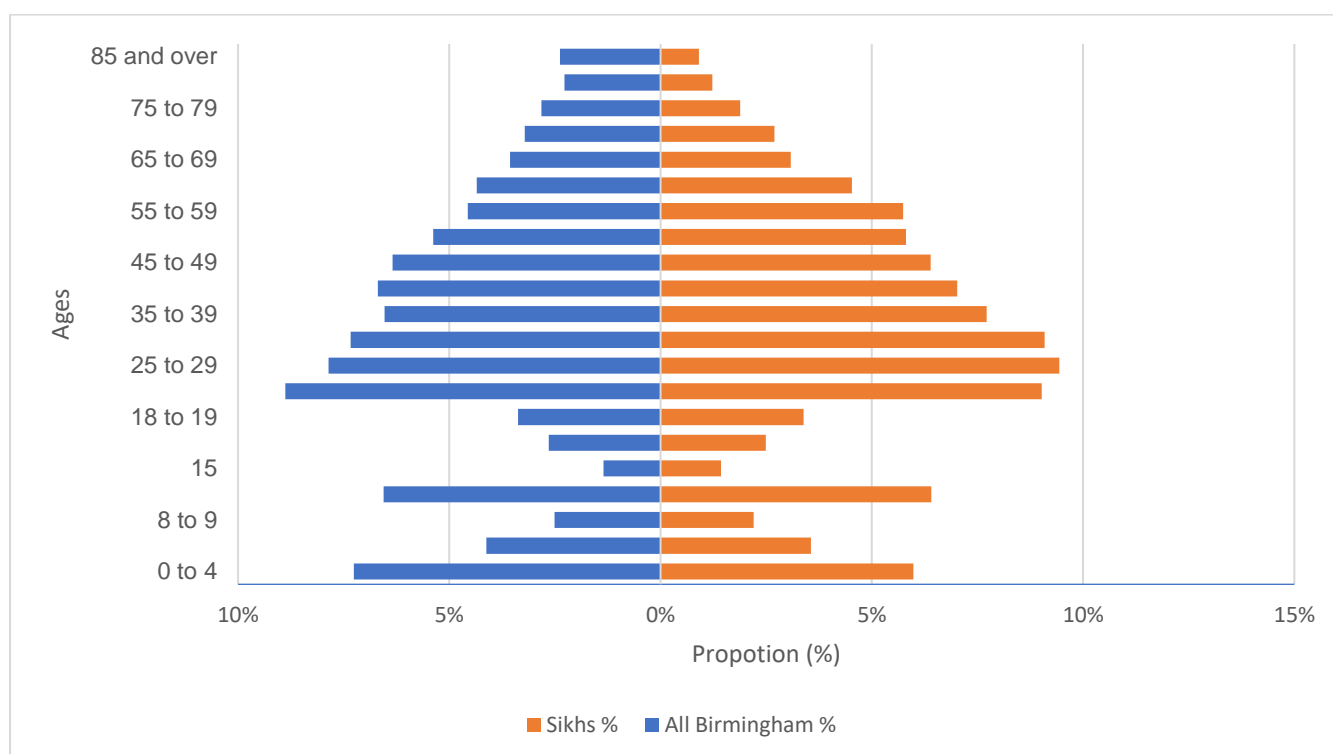


Source: Census 2011 ONS- DC2204EW

Figure 3 below show the age and gender profile of female Sikhs respectively compared to the Birmingham average. The figure evidences:

- In Birmingham the proportion of Sikh females aged 0-14 and 65+ is lower than general male population of the same age (18.1% compared with 20.5%) and (14.3% compared with 18.6%) respectively
- The proportion of Sikh females aged 20-59 is higher compared to the general population (60.2% compared with 53.6%)
- Sikh females aged 85+ only account for 0.91% of all females in Birmingham, which is a lower proportion compared to the City average (2.38%)
- The proportion of Sikh Females aged 20-59 is higher compared to the general population (60.2% compared with 53.6%)

Figure 3: Age and gender profile of female Sikhs compared to City average

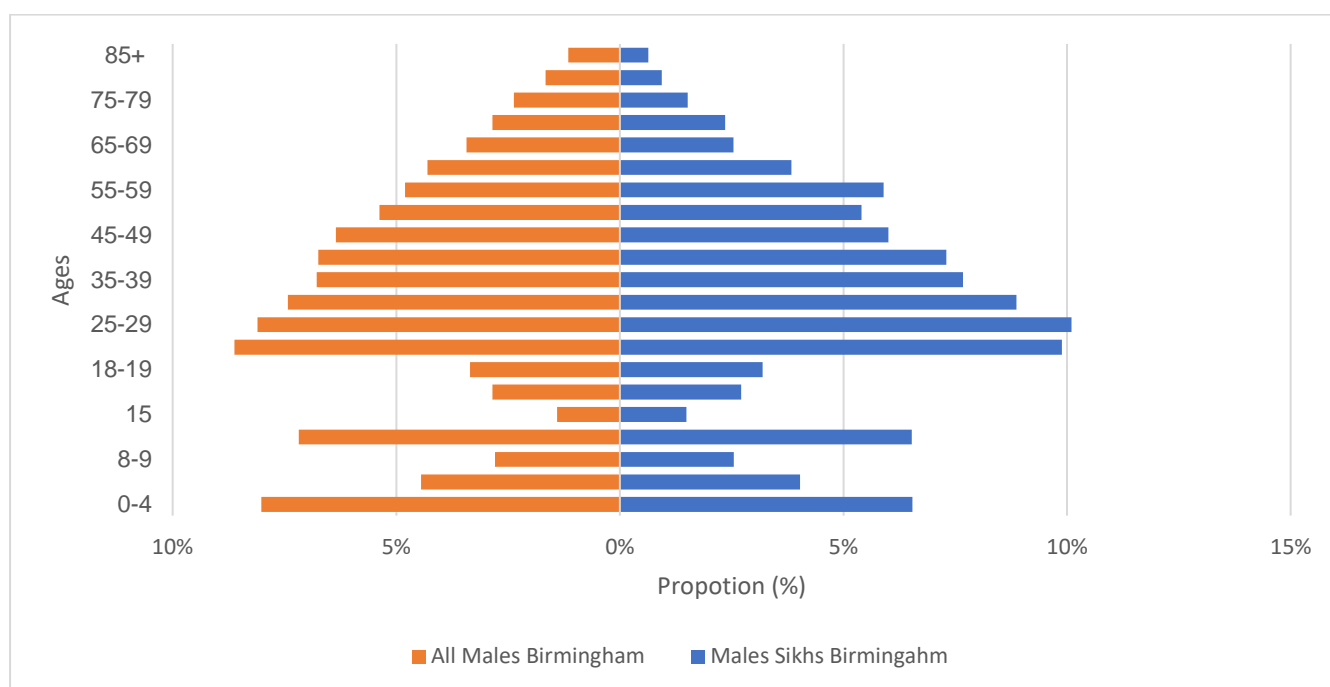


Source: Census 2011- DC2107EW

Figure 4 below shows the age and gender profile of male Sikhs respectively compared to the Birmingham average.

- In Birmingham the proportion of Sikh Males aged 0-14 and 65+ are lower than general male population of the same age (22.4% compared with 19.7%) and (15.8% compared with 11.8%) respectively

Figure 4: Age and gender profile of Male Sikhs compared to the City average



Source: census 2011- DC2107EW

Figure 5 below illustrates the distribution of Sikh population across Birmingham and evidences:

- The highest proportions of Sikhs are located in Handsworth wood (25%) and Soho (11.3%) areas
- Harborne, Hall green and Lozells and East Handsworth follow with more than 6% each
- Perry bar and Quinton have just over 5% of Sikh population each
- The rest of the Sikh population are evenly distributed across Birmingham (<5% in each ward).

Percentage of Religion Sikh in Birmingham Wards

Legend:

- 0.2 - 1.0
- 1.1 - 2.8
- 2.9 - 5.6
- 5.7 - 10.6
- 10.7 - 21.9

Wards labeled on the map:

- Sutton Four Oaks
- Sutton Trinity
- Sutton Veasey
- Sutton New Hall
- Oscott Kingstanding
- Erdington
- Tyburn
- Stockland Green
- Perry Barr
- Handsworth Wood
- Lozells and East Handsworth
- Aston
- Hodge Hill
- Washwood Heath
- Shard End
- Stechford and Yardley North
- Bordesley Green
- Sheldon
- South Yardley
- Sparkbrook
- Springfield
- Dacocks Green
- Hall Green
- Billesley
- Brandwood
- Kings Norton
- Northfield
- Longbridge
- Bournville
- Weoley
- Selly Oak
- Moseley and Kings Heath
- Seley and Kings Heath
- Harborne
- Needham
- Baston
- Quinton
- Bartley Green
- Ladywood
- Nechells
- Washwood Heath
- Soho
- Quinton

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3. Community Profile

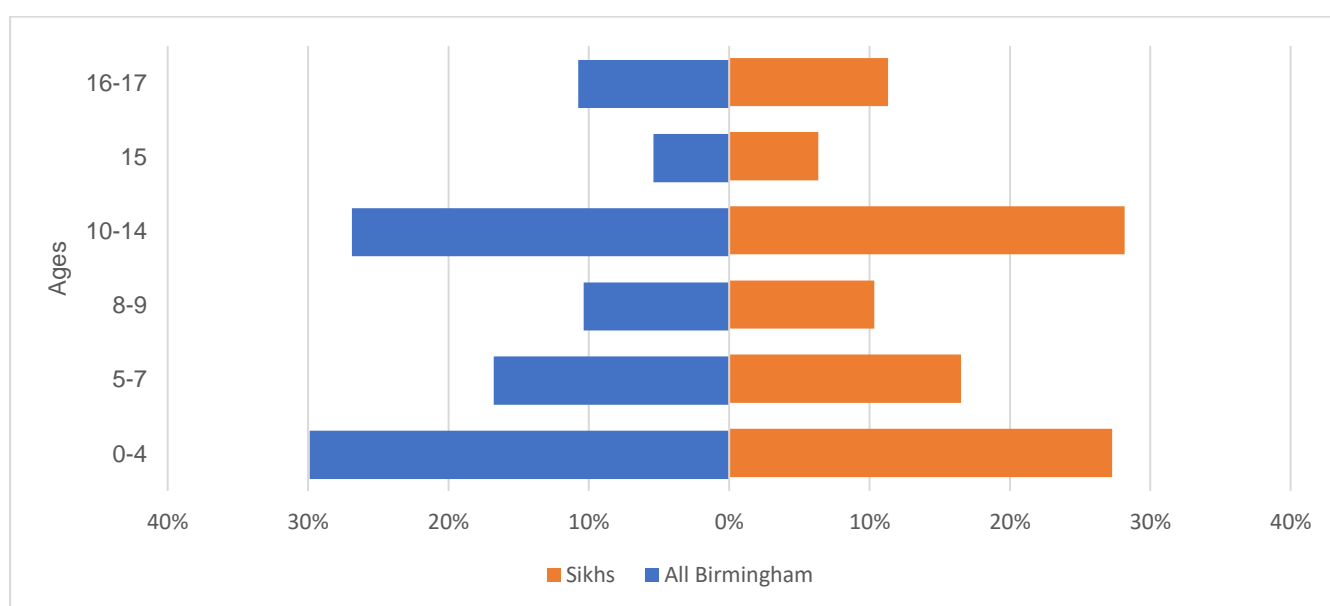
3.1. Getting the best start in life

Getting the best start in Life Key Findings:

- In Birmingham, there are **7,710** children registered as Sikh, representing **2.8%** of Children. This is compared to **100,430** Children registering as Sikh in England, representing **0.87%** of Children. (**3.5 times higher**).
- Breastfeeding is positively encouraged within the Sikh Community.
- Sikh children had a significantly higher uptake of DPT, measles and polio vaccine (**90% or more**) than non-Sikh children.
- A key theme that emerged through the qualitative research was respondent's experience of childhood bullying, with responses describing their children being set apart from others because of both their religious and racial identity.

In Birmingham, there are 7,710 children registered as Sikh, representing 2.8% of the children's population aged under 18yrs. This is a larger proportion than the national average (0.87% England).⁽¹¹⁾ Figure 6 below, illustrates the proportion of Sikh children at different ages, compared to with the proportion of the same age groups in Birmingham.

Figure 6: Sikh Children's age profile compared to Birmingham



Source: Census 2011- DC2107EW

From the published research there is evidence that:

- Breastfeeding is positively encouraged in the Sikh faith; ⁽¹²⁾ however local data is not available on breastfeeding uptake by faith.
- Some families in the UK are still superstitious but this is not endorsed by the Sikh faith. These superstitions are affiliated with the Punjabi culture where some families will not allow visitors to enter the house and directly visit the new baby and mother after a certain amount of time.
- Sikh children had a significantly higher uptake of measles vaccine (90% or more) than non-Sikh children, whereas Hindu and Muslim children did not have measles vaccine uptake rates significantly different from children from non-Asian ethnic groups.⁽¹²⁾
- There is both UK and international research that highlights the impact of bullying of Sikh children because of their religion as well as racial discrimination.⁽¹³⁾

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of contraception, antenatal and maternity services, education outcomes and other childhood support services.

3.2. Mental wellness and balance

Mental wellness and balance Key Findings:

- Shame, stigma and social acceptance remain to be the main barriers to accessing mental health services among Sikhs
- In general, Sikhs perceived mental ill health is similar to other religious groups
- **77%** of Sikhs in the UK find their lives stressful
- **11.5%** of Sikhs reported not to be in probable mental ill-health, less than people from all other religions
- More women than men are diagnosed with mental health illness (**10% compared with 5%**)
- **35%** reported job as the main cause of stress; **27%** is attributed to family responsibilities and **26%** is attributed to time pressures
- Meeting family needs and expectations of hypermasculinity is one of the factors that affect mental ill health in Sikh men, while women report pressure of gender norms around shame and honour
- **More** Sikhs in the UK reported that they have never drunk alcohol compared with the general population (**41% compared to 20%**)
- **More** Sikh women in the UK are likely to deny ever drinking alcohol compared to men (**45% compared with 35%**)

3.2.1. Mental health

In England and Wales, Sikhs were less likely to be in probable mental ill health than those who identified as Christian, Muslim, Hindu and those who identified as 'any other religion'. Sikhs were also more likely to report a higher perceived mental health score than those who identified as 'any other religion' and similar to other religious groups including Christian, Muslim and Hindu.⁽⁹⁾ However, there are limitations to the robustness of this finding because of a relatively small sample size of 26,403 individuals across all religions.

From the published research there is evidence that:

- Mental illness was associated with feelings of loneliness and homesickness, isolation from their host community, financial dependency on men and bringing up children without support from family networks.⁽¹⁴⁾
- Mental illness has generally not been openly discussed within the community, with mental illness being associated with shame and stigma.⁽¹⁴⁾
- Women are twice as likely to be diagnosed with mental health issues than men.⁽¹⁴⁾
- Over 70% of Sikhs stated that their lives are stressful, with family responsibilities, time pressures, employment and physical health condition being sighted as major causes of stress.⁽¹⁴⁾
- The effects of mental ill health on lifestyle were highest among young Sikhs (under 19), with the lowest effect being on those aged 65 and over.⁽¹⁴⁾
- Around 5% of Sikh's reported that they have a disability, with 18% of these individuals reporting mental health as the type of disability.⁽¹⁵⁾
- Racial harassment, expectations of hypermasculinity and excessive drinking were classed as factors affecting mental ill health among Sikh men, compared to pressures of fender norms, balancing working life and being the perfect daughter / mother / wife for mental ill health among Sikh women.⁽¹⁴⁾

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of admissions to mental health services, type of mental health disorder and mental health accessibility.

3.2.2. Alcohol

In the UK, 61% of Sikh stated that they at least drink occasionally, with males more likely to drink than females. However, the sample population of 1,000 only represents, 0.23% of the total Sikh population.⁽¹⁶⁾

From the published research, there is evidence that:

- First generation Sikh men are more likely to drink heavily than second generation males, however the reverse is occurring with Sikh females, with more second generational Sikh women drinking more than first generations.⁽¹⁷⁾

- Some Sikhs believe that the consumption of alcohol helps to work harder and longer.⁽¹⁷⁾
- Sikh males consume more units than White English and Black African-Caribbean men.⁽¹⁷⁾
- Typically, Sikhs are twice as likely to drink alcohol at home and are less likely to report negative experiences associated with drinking (i.e. law breaking) than White English respondents.⁽¹⁷⁾
- There is limited awareness of alcohol addiction, with some families being unaware of the consequences of addiction and think that he/she can just stop.⁽¹⁷⁾
- Accessibility barriers to addiction services include language, social stigma and fear of the community finding out about the individual's issue.⁽¹⁷⁾
- ¼ of individuals report that someone in their household drinks enough alcohol to be detrimental to another member of the household, with women being more likely to spot this than men.⁽¹⁸⁾
- Wives of Sikh males who have a drinking problem feel isolated in coping with the burden of their problems, however, feel obliged to show loyalty to their families.⁽¹⁹⁾
- Indian Sikh men were less likely than Black, Hindu and Pakistani men to recognise their own drinking problems.⁽²⁰⁾
- Punjabi culture, an increasing 'westernised approach', social pressures and Bhangra/ Punjabi song lyrics are cited as reasons for high alcohol consumption within the Sikh Community^{(16),(21)}
- The shame and stigma surrounded with alcohol addiction stops many seeking the help they require.^{(16),(21),(22)}

From the Expert opinion received from the local services that provide substance misuse and related health issues services in Birmingham, there is evidence that:

- Language barriers and other cultural issues are often a barrier, and therefore, families are left to deal with it on their own
- The Sikh drinkers tend to drink spirits and present seriously unwell with severe liver damage

- Most admissions are of middle-aged/older Sikh Men (aged between 45years – 65 Years) presenting at Hospital with alcohol related health issues. Most experience relationship breakdowns/divorce
- There has been an increase of MARAC referrals involving Sikh Males (perpetrators alcohol and Domestic Abuse). A lot of the referrals we come across are residing in C&W and East of Birmingham.

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of admissions to alcohol addiction services, alcoholism within Birmingham and alcohol related diseases.

3.2.3. Drug Use

Because of limitations in faith data collection there is a lack of evidence exclusive to the experiences of the Sikh population. Of the limited data available, there is no evidence to highlight if drug use is an issue or a hidden issue in the Sikh community.

Instead, most of the research tends to focus on substance misuse. The published research evidences that:

- A significantly high number of calls to the Sikh helpline in relation to substance addiction and abuse issues are from males⁽²³⁾
- Drugs and Drug Related issues are sighted within the top three categories in relation to substance addiction and abuse⁽²³⁾
- Shame, taboo, stigma and fears of isolation and loss of status are sighted as key reasons for the limited information relating to drug use among the community⁽²⁴⁾
- Males, aged between 20 – 34 are most likely to have consumed drugs⁽¹⁸⁾
- A relatively low number of Sikhs (11%) have tried cannabis or any other drug.

No data is available to understand the experiences of the Sikh population in the context of recreational drug misuse, drug addiction clinic services, drug trafficking and drug related deaths.

3.2.4. Smoking

There is limited evidence to understand the experiences of the Sikh population in the context of smoking. This is predominately due to the community not smoking, with the proportion of current smokers in 2016 to 2019 being lowest in Sikh people (2%).⁽⁹⁾ This was significantly lower compared to other religions such as no religion (18%) Christian (11%), Hindu (5%) and Jewish (4%).⁽⁹⁾

Further published evidence finds:

- A significantly high proportion of Sikhs reported that they had never tried tobacco^{(18),(25)}
- Sikhs were at lower cardiovascular risk by virtue of smoking less⁽²⁶⁾
- Only a small proportion of Sikhs understood that smoking was a risk factor for oral cancer.⁽²⁵⁾

Because of limitations in faith data collection and the low uptake of smoking within the Sikh community, there is limited evidence to understand the experiences of the Sikh population in the context of smoking related diseases.

3.3. Healthy and affordable food

Healthy and affordable Food Key Findings:

- Many Sikh families are vegetarian for religious reasons
- Elders prefer to eat traditional food every day, while younger generations prefer to eat Indian food occasionally
- Food choices are influenced by the ages of family members and preferences
- Sikhs celebrate numerous festivals throughout the year. Festivals and social events have an impact on diet among Sikhs
- **55.6%** of Sikhs are classified as physically active, less than Christians, Hindus, any other religion and those with no religion
- More Sikh men and women have higher levels of BMI obesity and raised Waist to Height Ratio (WHR) compared to other South Asian subgroups
- On average, more Sikh women weigh lighter than white women

3.3.1. Diet

Sikhs who have taken Amrit (baptised) are vegetarians and exclude eggs, fish and any ingredients with animal derivatives or cooked in animal fat from their diet. Some non-vegetarian Sikhs will only eat meat that has been slaughtered according to their own rites (Jhatka) and not halal or kosher rites.⁽²⁷⁾

Published research on diet within the Sikh community evidenced:

- Some Sikhs will only eat food prepared by their own families⁽²⁷⁾
- Food is a staple for celebration at numerous Sikh festivals such as Gurupurabs, Vaisakhi and Holla Mohalla
- Langar (communal free kitchen) is provided at all Gurdwara's, serving free food to all regardless of age, ethnicity or religion
- Only vegetarian food is served at Gurdwaras to allow everyone, regardless of their dietary restriction to eat⁽²⁸⁾

- There is international research which highlights the contrasting dietary desires of older Sikhs, who have a preference to eat traditional food, whereas many teens and young adults have a desire for 'westernised foods' such as sugar sweetened beverages⁽²⁹⁾
- Sikhs follow dietary laws for their Code of Conduct, Sikh Rehat Maryada.⁽²⁸⁾

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of dietary customs within the UK.

3.3.2. Obesity

There is limited research and information regarding the number of Sikhs within the UK and West Midlands who are classed as overweight or obese. However, there is published research which suggest obesity rates are higher in the South Asian population compared with the general population.

The limited published research on obesity rates within the Sikh population shows evidence that:

- Sikh males have a significantly higher body fat compared to Caucasian men⁽³⁰⁾
- Indian Sikh women and men have higher levels of BMI Obesity than Indian Hindu or of individuals who stated 'other religions'⁽³¹⁾
- Indian Sikh women and men have the highest proportion with raised Waist Height Ratio compared to Indian Muslim, Hindu or of individuals who stated 'other religions'⁽³¹⁾
- Sikh women are on average 2.53kg lighter than white women, with there being no statistically significant difference between the weight of Indian Sikh and White men⁽³¹⁾
- A significantly high proportion of Sikhs (91%) were classed as overweight and had a positive energy balance of at least 300 Kcals. However, the sample population was limited to 167 Sikhs in Kent, UK which does not provide a true representation of the UK Sikh population.⁽³²⁾

As stated, there is a lack of published research which focuses on a large sample size of the Sikh community. As such, there is limited evidence to understand the

variations in weight between the Sikh community and the UK population, BMI levels and healthy eating education.

3.4. Active at every age and ability

Active at every age and ability Key Findings:

- Around half of Sikhs adults self-reported being physically active
- Sikhs aged 65 and over are most likely to set aside physical active time every day
- Women reported preferring to exercise at home rather than attend gym sessions

A total of 46% of Sikh's reported that they set aside time for exercise at least a few times per week, with those aged 65 and over most likely to set aside time every day.⁽¹⁴⁾ However, the study has a small sample population, meaning limited conclusions can be made.

From the published research there is evidence that:

- Some Sikh males described motivational difficulties in increasing physical activity levels, particularly in colder winter months⁽³³⁾
- Sikh women had a preference to exercise at home rather than attend gym sessions⁽³³⁾
- Sikhs reported higher levels of physical activity compared to Hindus and Muslims, but less than Jewish, Christian's and those who stated no religion⁽³⁴⁾
- Around half of Sikh adults were classed as physically active (at least 150 minutes of moderate physical activity per week). Buddhists, Jews, Hindu's and Christians all stated that their exercise levels were higher.⁽³⁴⁾

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of the, childhood physical activity

levels, older people's physical activity levels, attitudinal beliefs to exercise and participation in sport for disabled Sikhs.

3.5. Working and learning well

- Only 1% of Sikhs in the UK claim housing Benefit
- **28%** of Sikhs have 'higher level qualifications' and an 'apprenticeship or other qualifications', **higher** than the general population
- **More** Sikhs are economically active than the general population of Birmingham (**66% compared to 59%**)
- **More** Sikhs in Birmingham are self-employed compared to the general population (**34% compared to 41%**)
- A smaller proportion of Sikhs are economically inactive compared with the general population (**34% compared with 41%**)
- The proportion of Sikhs in Birmingham working in managerial/senior official and customer services/sales is higher than the general population (**12% in each category**)
- **87%** of Sikhs in the UK own at least a portion of their home
- Slightly more Sikhs in Birmingham live in overcrowded homes than the general population (**13% compared with 12%**)
- More Sikhs live as one family only/married/partnership/cohabitating couples, compared to the general population (**44% compared to 37%**)
- Less Sikhs live as a lone parent compared to the general population (**11% compared to 15%**)
- On average, a slightly larger proportion of Sikhs in Birmingham report 'very good or good health' compared to the general population (**80.8% compared with 79.4%**)
- On average, more Sikhs in Birmingham and aged 50+ report bad or very bad health compared to the general population of the same age (**21.5% compared with 2.3%**)
- Sikhs in the UK and aged 65 and over are about **3 times** more likely to report a disability, compared to the general population
- Generally, (**7.7%**) of Sikh women in Birmingham are likely to report 'bad' or 'very bad' health, compared to men (**4.9%**). This is a similar trend in the general population

3.5.1. Education

There is a lack of published research on educational attainment of the Sikh population in the UK. Therefore, the evidence relating to Education is derived from the 2011 Census.

In England and Wales, there are 101,221 Sikhs whose highest level of qualification is Level 4 and above, representing 30% of the Sikh population. This is a larger proportion than the national average (27% England and Wales).

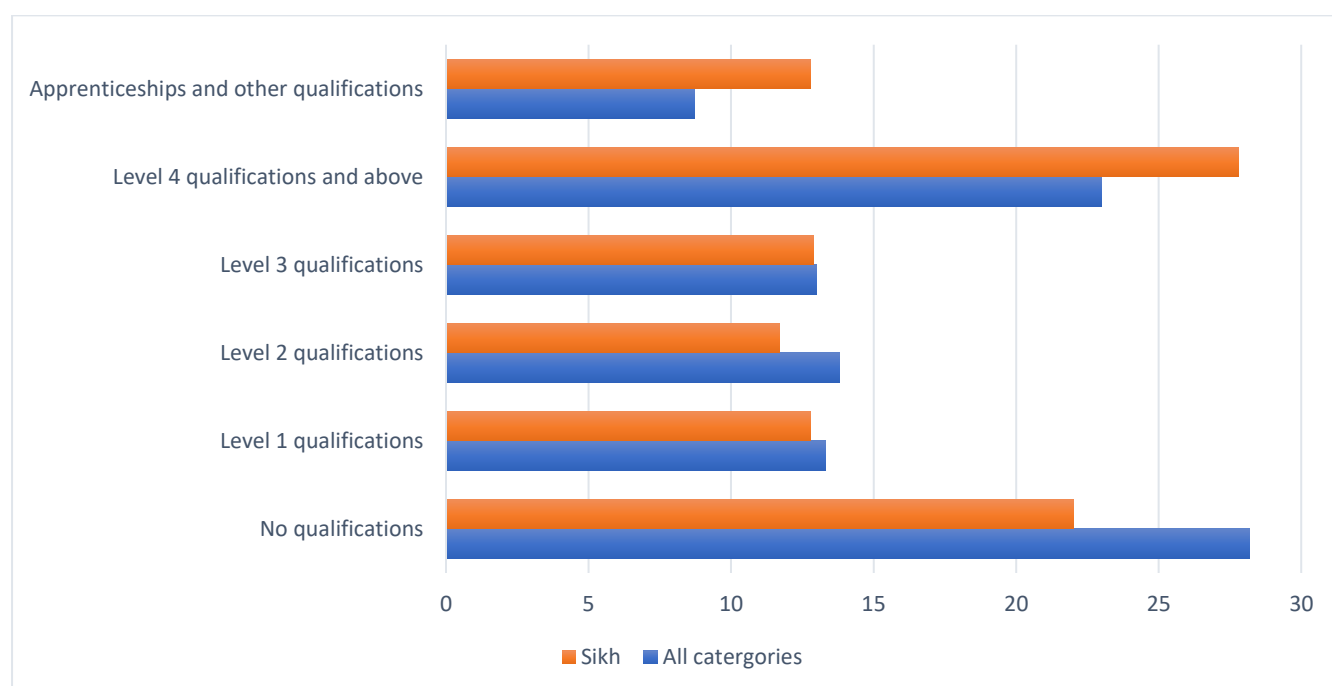
In Birmingham, there are 7,713 Sikhs whose highest level of qualification is level 4 and above, representing 27.8% of the Sikh population. This is a larger proportion than the Birmingham average (23%).

Figure 7 below, illustrates the 'Highest level of qualification by religion'^b of Sikhs in Birmingham compared to the general population. there is evidence that:

- Sikhs in Birmingham and England are significantly less likely to have no qualifications than the general population.
- Sikhs are 25% more likely to have an apprenticeship than the general population in Birmingham.
- Sikhs reported lower levels of Level 1 and Level 2 qualifications than the Birmingham population.
- Sikhs reported similar levels of attaining a Level 3 qualification with the Birmingham population.

^b LC5204EW – Highest Level of qualification by religion

Figure 7: Level of qualifications among Sikhs in Birmingham compared to the general population



Source: *Census 2011 ONS LC5204EW*

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of education aspirations, school attendance, literacy rates, numeracy rates and child speech development.

3.5.2. Economic Activity

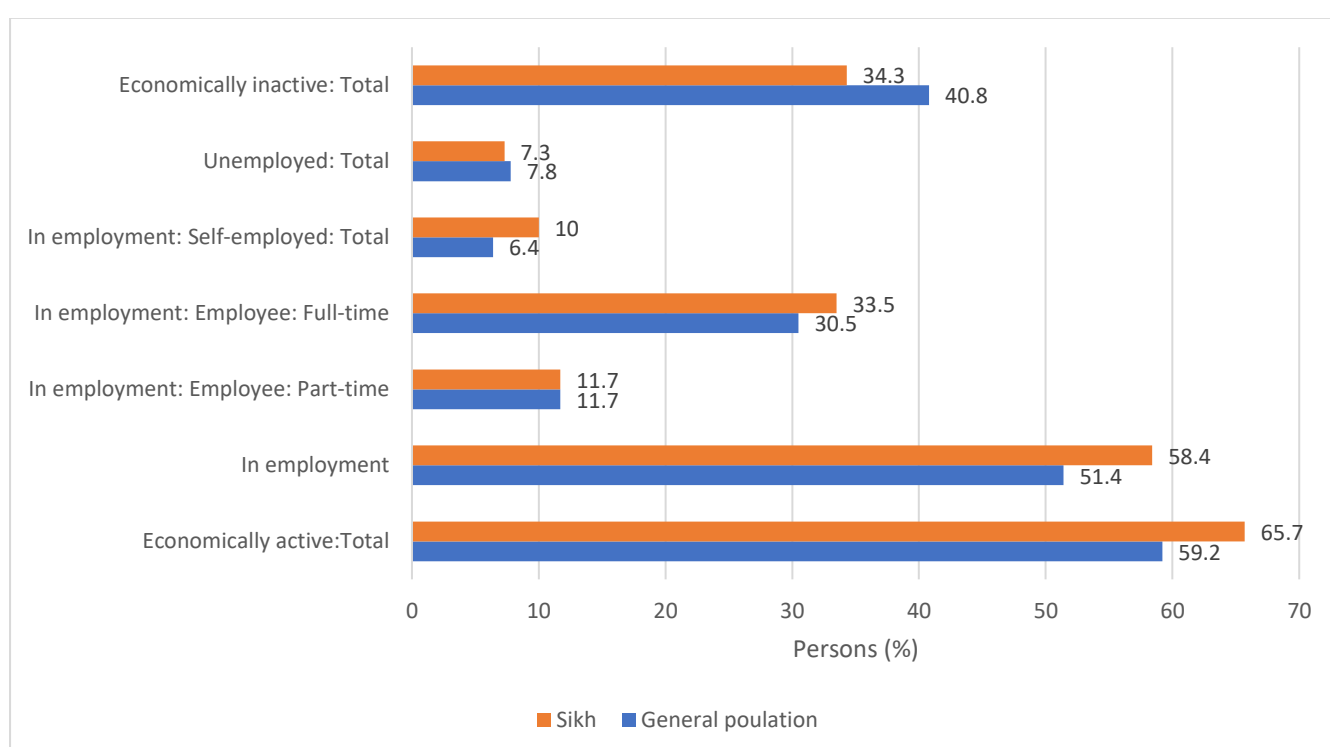
65.7% Of the 25,782 Sikhs aged 16 and over living in Birmingham are economically active. This is a larger proportion than the national average (63.6% England) and the local average (59% Birmingham).

There is a lack of published research on economic activity of the Sikh population in the UK. Therefore, the evidence relating to Economic Activity is derived from the 2011 Census economic Activity by religion and Occupation by religion.

Figure 8 below, 'Economic Activity by Religion'^c shows that there is evidence that:

- A slightly higher proportion of Sikhs in Birmingham are in full time employment (34%) compared to the local population (31%)
- Sikhs in Birmingham are significantly less likely to be economically inactive than the local population (34% compared with 41%), with a lower proportion being inactive due to retirement or caring responsibilities.

Figure 8: An overview of Economic Activity of Sikhs compared to the general population in Birmingham



Source: Census 2011- ONS Nomis LC6205EWE

Figure 9 below, Occupation by Religion'^d shows that there is evidence that:

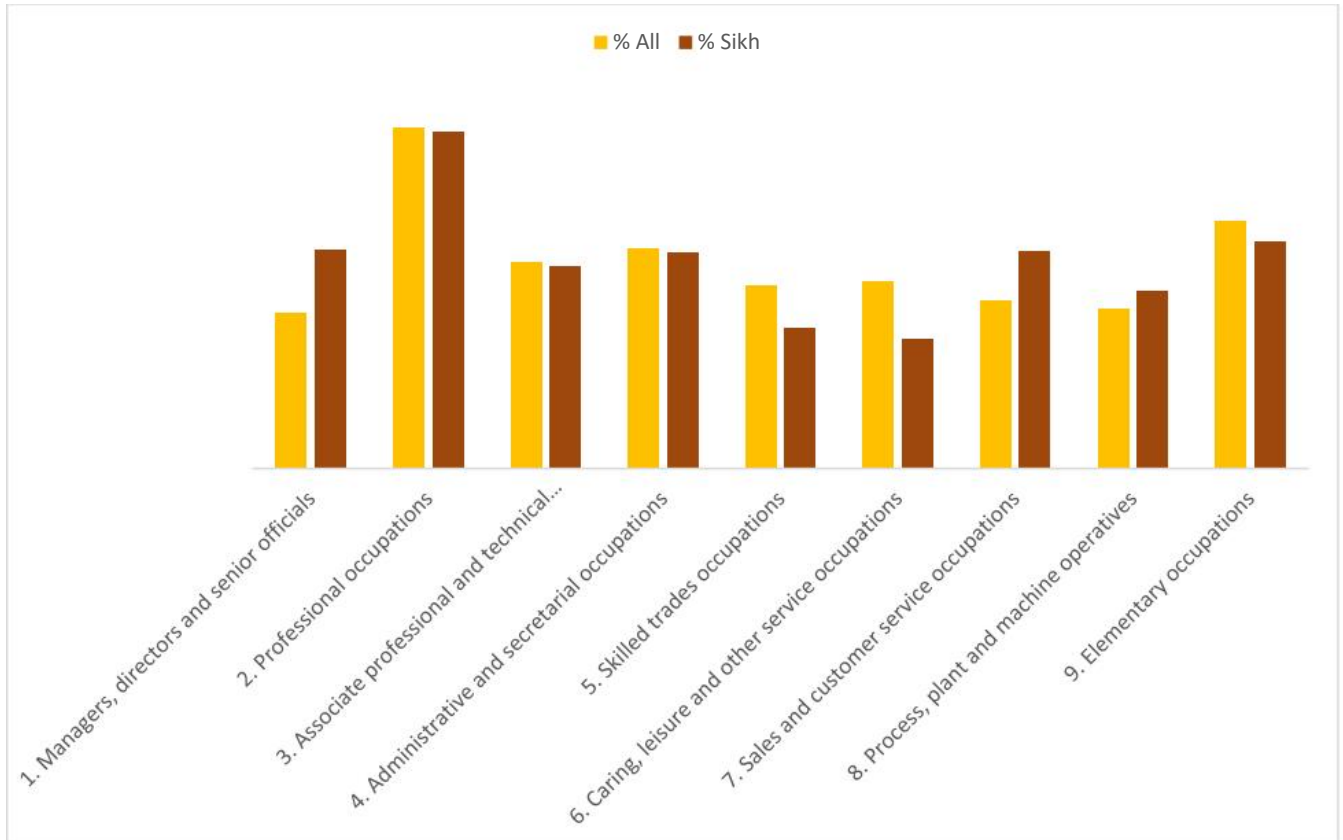
- A higher proportion of Sikhs are reported to be Managers, Directors or Senior officials than the Birmingham population (12% compared to 9%)

^c LC6205EW – Economic Activity by Religion

^d LC4207EW – Occupation by Religion

- There was no significant difference between Sikhs and the Birmingham population of those working in professional, administrative and associate professional and technical occupations
- A lower proportion of Sikhs in Birmingham work in Skilled trades (8%) than the local population (10%).

Figure 9: Occupation by Sikh religion compared with Occupation by All in Birmingham



Source: Census 2011 ONS LC4207EW

From the limited published research there is evidence that:

- Around 1 in 3 of British Sikh Families own a business in the UK⁽³⁵⁾
- Around two thirds of British Sikh households have pre-tax incomes above £40,000 and over a third have a household income in excess of £80,000⁽³⁵⁾
- The Sikh community contribute an estimated £7.6 billion to the UK economy as of 2014⁽³⁵⁾

Because of limitations in census data collection, there is limited evidence to understand a more up to date picture of the experiences of the Sikh population in the context of economic activity. Moreover, due to limitations in faith data collection there is limited evidence concerning deprivation and poverty exclusive to the Sikh Community.

3.5.3. Housing

25% of the Birmingham Sikh population live in households with more than one family, significantly higher than the general population of Birmingham (11%). In addition, a smaller proportion of Sikhs live in single person households (16%) compared to the general population of Birmingham (32%).

There is a lack of published research on economic activity of the Sikh population in the UK. Therefore, the evidence relating to Housing is derived from the 2011 Census, in particular, Household composition by religion of Household Reference Person (HRP) and Occupancy rating (rooms) by religion of Household Reference Person (HRP).

From the 2011 Census there is evidence that:

- For individuals aged 65+, a smaller proportion lives in one family only household compared to the general population of Birmingham.
- A larger proportion of Sikhs live as one family only married/same sex/civil partnership or cohabitating couples (44% compared with 37%) and a smaller proportion live as a lone parent (11% compared to 15%)
- A slightly higher level of overcrowding was reported for Sikh communities than the general population of Birmingham (13% compared to 12.4%).

From the limited published research, there is evidence that:

- 87% of Sikhs own at least a portion of their home, with 30% of British Sikhs owning their own homes outright⁽³⁵⁾
- Half of British Sikh families own more than one property in the UK and a similar number own at least one property in India⁽³⁵⁾
- 6% of Sikhs own a property elsewhere in Europe.

Because of limitations in census data collection, there is limited evidence to understand a more up to date picture of the experiences of the Sikh population in the context of Housing. Moreover, due to limitations in faith data collection there is limited evidence concerning Housing deprivation, fuel poverty and the type of housing most commonly bought.

3.5.4. General health

In general, a slightly smaller proportion of Sikhs reported their health status as being in 'bad or very bad health' overall but over the age of 50-years, a larger proportion of Sikhs reported bad or very bad health compared to the average for Birmingham.

Table 1: Health Status by age group

Religion	Age Group	Very good or good health	Fair health	Bad or very bad health
<i>All</i>	All Ages	79.4%	13.9%	6.7%
	Age 0 to 15	95.7%	3.3%	1.0%
	Age 16 to 49	86.8%	9.5%	3.6%
	Age 50 to 64	62.8%	24.0%	13.2%
	Age 65 and over	40.6%	38.1%	21.3%
<i>Sikh</i>	All Ages	80.8%	13.0%	6.3%
	Age 0 to 15	97.3%	2.1%	0.6%
	Age 16 to 49	89.4%	8.2%	2.4%
	Age 50 to 64	57.4%	27.7%	14.9%
	Age 65 and over	30.3%	41.6%	28.1%

Source: 2011 Census

Exploration of 'bad or very bad' health status by gender draws out some differences, the percentage is higher for Sikh women in general but lower for Sikh men, this is driven by higher levels of poor health in older age groups of Sikh women report higher, but in Sikh men they have lower levels than the average population in all age groups under 65years.

Table 2: 'Bad or very bad' Health status by age group and gender

		Males	Females
All	All Ages	6.2%	7.2%
	Age 0 to 15	1.1%	0.9%
	Age 16 to 49	3.6%	3.6%
	Age 50 to 64	12.9%	13.6%
	Age 65 and over	19.6%	22.6%
Sikh	All Ages	4.9%	7.7%
	Age 0 to 15	0.6%	0.5%
	Age 16 to 49	2.3%	2.5%
	Age 50 to 64	11.5%	18.2%
	Age 65 and over	21.2%	33.8%

Source: 2011 Census

3.5.5. Long-standing health impairment, illness or disability

The Census captures information on disability in the context of an impairment or illness level of impact on daily activities. In general, a smaller proportion of Sikhs reported having impairments, illness or disability that limited their day-to-day activities a lot or a little compared to the general population of Birmingham.

Table 3: Impact of long-standing health impairment, illness or disability on daily activities in Birmingham population

Religion	Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities not limited
All	9.1%	9.3%	81.6%
Sikh	7.7%	8.8%	83.5%

Source: 2011 Census

The ONS report in 2018,⁽⁹⁾ found that the majority of Sikhs (69%) were estimated as being satisfied with their health and perceived their health as good (score of 49.0). These reports are both similar to several other religious groups. Sikhs were also reported as having the lowest prevalence of long-standing physical/mental impairment, illness or disability (22%) compared to all other religious groups. In addition, the prevalence of long-standing physical/mental impairment, illness or disability was significantly lower among Sikhs (22%) compared to those who identified as Christian (36%), Muslim (35%), or as having no religion (35%).

From the published research there is evidence that:

- Around 5% of all Sikhs reported having a disability, rising to 16% for those aged 65 and over. 4% of all males reported to having a disability, compared to 6% of all females. Of those who reported having a disability, 50% stated that they are looked after by family and 19% have respite care available⁽¹⁵⁾
- Across all generations of the sample, participants demonstrated limited knowledge of the different types of services provided by the NHS other than GPs, e.g. community health centres and health trainers⁽³⁶⁾
- The type and location of support that is accessed are influenced by intersecting influences of ethnicity, gender, and generation
- Differences across generations became evident with poorly educated older migrants solely reliant on verbal information limiting the resources that could be potentially accessed with regard to self-management

- Participants, particularly women, explained that distress led to poor management of their health conditions and so increased emotional resilience was an important tool to maintain well-being which led to better management of overall health.

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of provision of or access to services and other themes around the long-standing health impairment, illness or disability among Sikhs in Birmingham.

3.5.6. PCOS

Polycystic Ovary Syndrome (PCOS) is a heterogeneous endocrine condition experienced by women leading to several health complications. It is likely to be undiagnosed.

From the published research there is evidence that:⁽³⁾

- Tension between societal 'norms' and cultural beliefs e.g. some Sikh Amritdhari women feeling torn between seeking treatment for hirsutism and their beliefs which forbid hair removal
- Highlighted cultural barriers and taboos as well as the stigma associated with PCOS symptoms
- Language barriers which may prevent women whose first language may not be English from presenting to GPs or other community healthcare settings
- Beliefs around PCOS being a sexual function disorder and/or a sexually transmitted disease – creating a taboo around discussion of the condition and dissuading women from seeking healthcare

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of prevalence/incidence rates, provision of or access to services, knowledge and understanding of PCOS condition among Sikh women.

3.6. Protect and Detect

Protect and Detect Key Findings:

- Cancer screening uptake is lower in Sikhs in the UK, compared to the general population
- On average, colorectal cancer screening uptake among Sikh communities is **(32%)**, which is lower than in England and Scotland **(61%)**
- Barriers to lower uptake rates include limited knowledge about the screening procedures and the purposes of screening, lack of Sikh community specific health promotion, difficulties in negotiating many family structures and cultural obstacles, and language barriers
- Generally, Sikhs are **less** likely to accept **vaccinations**
- A smaller proportion of Sikhs in the UK, aged 70 years and older had a lower uptake of Covid-19 vaccine by March 2021, compared to the general population of the same age group **(80% compared to 80.2%)**
- On average, **99,4%** of Sikh female adolescents in the UK will accept the HPV vaccination, which is lower than those of no religion and Muslims of the same age

3.6.1. Cancer screening

There is a range of research studies that show that across different cancer screening programmes uptake is lower in ethnic communities, especially South Asian communities but there are very few studies that explore this through the prism of faith and religion.

From the published research there is evidence that:

- studies of bowel cancer screening uptake rates in different ethnic and faith communities found that when compared to the general population, Christian Church of Scotland or Hindu populations, there was a lower rate of uptake in the Sikh community^{(37),(38),(39)}
- Another study into the uptake of colorectal cancer screening in England⁽³⁸⁾ among South Asian faith communities similarly highlights lower uptake, with 34.6% of Sikhs taking up screening compared to 61% of the general population.

Qualitative studies highlight the need to engage faith communities in disseminating information verbally as well as in written formats and the importance of translated resources

- Reasons for low colorectal cancer screening uptake were limitations posed by written English; limitations posed by any written language; reliance on younger family members; low awareness of colorectal cancer and screening; and difficulties associated with faeces⁽³⁸⁾
- The uptake of cervical cancer screening among Sikh women was lower than the non-Asians. limited knowledge about screening and purpose of the Pap test are contributing factors to screening. Women also report that cultural values and family expectations place considerable constraints on the behaviour of Sikh women and ultimately affect cervical cancer screening⁽³⁹⁾
- Significantly more Sikh individuals also recorded as being 'under process (25%), higher than the non-Asians (5.8%).⁽³⁹⁾

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of access to or engagement with screening services, knowledge and understanding of screening services.

3.6.2. Vaccination programmes

Vaccination uptake among UK Sikh community is lower compared to the general population. ONS report on the 1st dose of Covid-19 vaccination rates (Between 8th December 2020 and 11 March 2021) among people aged 70+ years who live in England⁽⁴⁰⁾ stated that Covid-19 vaccination rates among Sikhs (87%) were lower than Christians (91%), similar to Hindus (87.1%), and higher compared to Muslim and Buddhist (72.3% and 78.1% respectively).⁽⁴⁰⁾

From the published research there is evidence that:

- Girls from Sikh backgrounds are less likely to accept the HPV vaccination compared to the general population (OR = 0.09, 95% CI: 0.01–0.56)⁽⁴¹⁾
- There is lack of awareness around how men can be affected by HPV, and many are confused about the types of viruses, its links with cancer and how it that develops⁽⁴²⁾

- A research study into vaccine hesitancy for diseases such as polio, measles and diphtheria-tetanus-pertussis in Chandigarh, India (19/305= 6% Sikhs)⁽⁴³⁾ reported that Sikh mothers had greater vaccine hesitancy than Hindu mothers, after adjusted for other socioeconomic factors.

The local and national evidence to support prevalence and other themes around vaccination uptake among Sikhs is very limited. The available evidence has very small samples of Sikhs and we cannot make a conclusive assessment.

3.6.3. Sexual health

Very little information was found on sexual health for people from Sikh communities.

Research conducted in Heterosexual South Asian men who were all Sikh based in Gravesend, Kent found:⁽⁴⁴⁾

- All participants were unclear about STIs, the number or types of infections that could affect them and the possible impact on their health.
- Participants generally thought that STIs were more of an issue for women
- Although some individuals had a sense that STIs may not always have symptoms, there was no sense that they could have been exposed to an STI in the past.
- All individuals agreed that sexual health and sex is a difficult topic for discussion in the local Indian community, with their fathers not discussing sex education.

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of prevalence/incidence, knowledge and understanding of STI's, service provision and access to health services relating to sexual health in Sikhs.

3.7. Ageing well and dying well

Ageing well and dying well Key Findings:

- Most services struggled to deliver responsive, culturally appropriate care for people of the Sikh religion
- There is no specific information on the prevalence of diabetes and Cardiovascular in the Sikh population. However, prevalence is higher in South Asian populations, with earlier disease onset for diabetes
- Sikhs experience greater negative support from close family and friends and higher levels of interactions compared to other south Asian subgroups- these psychosocial factors are among many that may put them at increased risk of CVD
- No data were found relating to exclusively Sikh communities and COPD. However, evidence show that prevalence in South Asians is lower, compared with the general population
- **11%** of Sikh households in the UK have somebody living with dementia or Alzheimer's and **62%** of Sikhs with dementia or Alzheimer's are looked after by family members
- The negative perceptions of a dementia diagnosis made it more likely for it to be concealed from their community
- Experiences of end of life in Sikh communities locally and in the UK are similar to those in the general population
- There is poor uptake of palliative care among people of the Sikh religion
- Only a **3rd** of the Sikh population reported they do not know how to access the service and lacked understanding of the Advanced Care Programme.

There is very limited data on specific health conditions by religion, most recording (and therefore analysis) by ethnic group.

3.7.1. Diabetes

There is no evidence of prevalence of diabetes exclusive to the Sikh population. However, research shows prevalence is higher in South Asian populations, with earlier disease onset.^{(45),(46),(47),(48)} The risk of developing diabetes is between two to six times higher in South Asians when compared with White Europeans in the UK.⁽⁴⁸⁾

Study researches, one UK-based, and one New York-based evidenced the following:

- The rate of Physical activity among Sikhs is unknown⁽⁴⁹⁾

- perceptions of the causes of T2DM- Participants perceived excess sugar intake as a primary behavioural cause for Sikhs
- In comparison to diet, lack of PA was not perceived as a significant risk factor for the onset of T2DM
- Dietary practices and levels of PA were impacted by gender and cultural norms within participants as these are passed through generations to preserve the collectivist Sikh culture
- A culturally-adapted CHW diabetes prevention program in the Sikh community is efficacious, adding to the growing literature on CHWs' capacity to address health inequity among underserved populations⁽⁴⁸⁾
- Treatment participants were more likely to lose weight after 6 months, compared with the control participants – 74% treatment group vs 42% of the control group
- Significant intervention effects for diabetes prevention-related indicators, such as PA self-efficacy; likely to increase total PA and more likely to increase social interaction

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of prevalence/incidence, disease management, service provision and access to health services relating to Diabetes in Sikhs.

3.7.2. Cardiovascular disease

Because of limitations in faith data collection, there is limited evidence to understand Cardiovascular disease prevalence within the Sikh community. However, there is limited published research available which evidences:

- The prevalence and cardiovascular related mortality are higher in South Asian populations^{(50),(51)}
- Psycho-social factors such as emotional support, job demands, job control, financial strain and overcrowding adversely affect the Sikh population more so

than the people of White British origin, which puts the community at higher risk of cardiovascular disease.

- Sikhs experienced greater negative support from close family and friends, with high levels of negative interactions being positively correlated with higher incidents of cardiovascular diseases^{(52),(53)}
- Older immigrant Sikh men may encounter difficulty accessing the healthcare system due to language barriers and religious beliefs. ^{(52),(53)}

There is limited evidence concerning prevalence, provision and access to health services, and knowledge and understanding of cardiovascular disease.

3.7.3. Chronic Obstructive Pulmonary Disease

No data were found relating to exclusively Sikh communities. however, evidence shows that prevalence in South Asians is lower, compared with the general population^{(54),(55)}

3.7.4. Cancer

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of cancer.

The limited published research available evidences:

- A significantly lower number of first-generation elder Sikhs had heard of the condition 'oral cancer' compared to 2nd generational Sikhs⁽⁵⁶⁾
- There is lack of knowledge of cancer as a disease and its symptoms. Most breast cancer patients did not recognise a painless lump as a cancer symptom and sought help when their cancer was in late stage⁽⁵⁷⁾
- Sikhs perceive cancer to be a taboo subject⁽⁵⁷⁾
- Only one in three 2nd Generational Sikhs understood that smoking was a risk factor for oral cancer⁽⁵⁶⁾

There is limited evidence to understand the prevalence/incidences, experiences and other themes relating Sikhs and cancer illnesses. Moreover, the available published evidence for Sikhs features very small Sikh population samples to make conclusive analysis that are generalisable to the Sikh population in the UK.

3.7.5. Dementia

According to the Sikh report (2019),⁽¹⁸⁾ 11% of Sikh households have somebody living with dementia or Alzheimer's. 62% of Sikhs with dementia or Alzheimer's are looked after by family members. Similar to reports on other health conditions, Sikhs reported that language as the greatest barrier to accessing support concerning dementia, followed by a lack of cultural understanding of the condition.⁽⁵⁸⁾

From the UK local and national published research, there is evidence that:

- There is very little awareness of dementia among Sikhs^(59, 60)
- Stigma and negative perceptions of a dementia diagnoses contribute to families concealing symptoms and diagnoses from their community⁽⁵⁹⁾
- Reported problems with both access to and use of health and social care services namely due to cultural and language barriers within existing services⁽⁶⁰⁾
- Experiences of health and social care services for Sikh carers revealed wider discourses of the social inequalities and exclusion faced by ethnic minorities when attempting to access services.⁽⁵⁸⁾

Because of limitations in faith data collection there is limited evidence to understand the experiences of the Sikh population in the context of prevalence/incidence, disease management, service provision and access to health services relating to dementia in Sikhs.

3.7.6. End of life

In England and Wales, there is a poor uptake of end-of-life care among Sikh communities and the reasons are multifactorial. Although there is evidence of a lack

of awareness of palliative care, family-led factors are the most reported reason for relatives adopting the caring role. However, the experiences of South Asian Sikh and Muslim patients and their families are, in many respects, similar to those identified in other end of life studies in the general population.^{(36),(44)}

Published research evidence found:

- On average, more than half of Sikhs patients with life limiting illness would like to express wishes towards the end of their life. However, only a third know how to access the services⁽⁶¹⁾
- Most services struggled to deliver responsive, culturally appropriate care⁽³⁶⁾
- Other Identified barriers to accessing effective end of life care: resource constrained services; institutional and, occasionally, personal racial and religious discrimination; limited awareness and understanding among South Asian people of the role of hospices; and difficulty discussing death due to communication barriers.⁽⁴⁴⁾

There is a need for health professionals to reach out to this population to increase awareness of and trust in the services that are available to support care at the end of life.

3.8. Closing the gaps

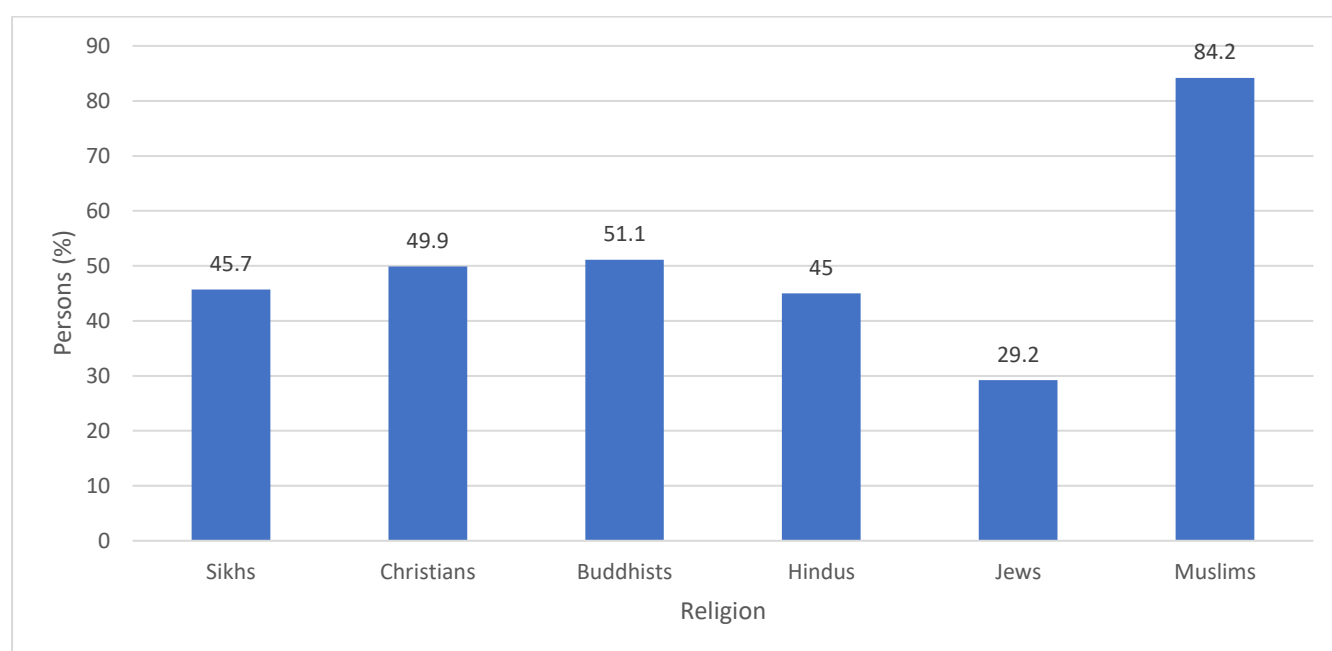
Closing the Gaps Key Findings:

- Sikhs are mostly concentrated in Handsworth wood, Harborne, Quinton, Edgbaston and Hall green where they can expect an average life expectancy of 81.6 years, and those in living in Soho and Lozells can expect an average life expectancy of 76.7 years.
- **45.7%** Sikhs in Birmingham live in areas classified as 20% most deprived, a smaller proportion compared to Muslims, Christians and Buddhist, but larger compared to Jews and Hindus
- **2.9%** (n=933) Sikhs in Birmingham live in areas classified as 20% least deprived, smaller proportion compared to Christians and Hindus, but larger than Buddhist, Jews and Muslims
- **45.7%** of Sikhs living in the most deprived areas in Birmingham can expect to spend a long time in poor health compared to the **2.9%** in the least deprived areas (**3rd of life compared with 6 years**)
- Sikh males living in the most deprived areas of Birmingham can expect to live, on average, **9 years** less than those living in the least deprived areas
- Sikh females living in the most deprived areas of Birmingham can expect to live, on average, **8 years** less than those living in the least deprived areas

45% of the 32,376 Sikhs in Birmingham live in areas classified as 20% of the most deprived areas in England. This is a significantly larger proportion compared to the Jewish community (29%) but lower than the Muslim community (84%).

The majority of Sikhs in Birmingham are concentrated in Handsworth Wood, Harborne, Quinton, Edgbaston and Hall Green.

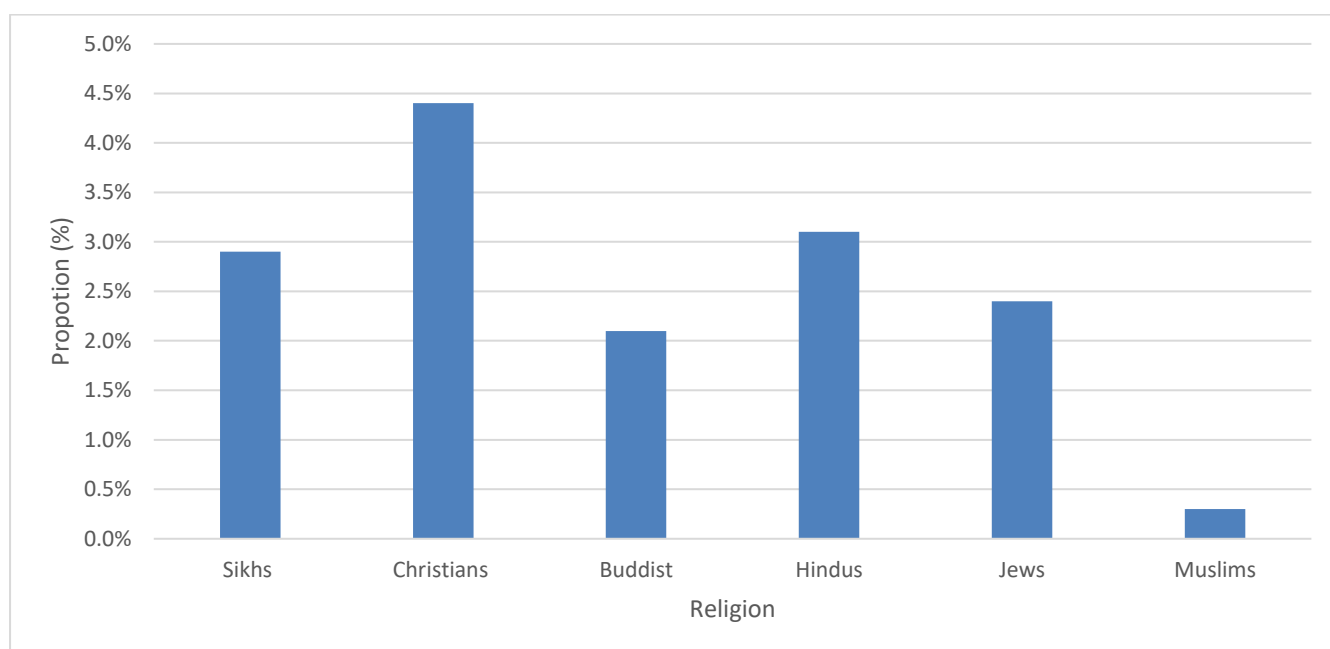
Figure 10: Persons (%) living in 20% most deprived areas in Birmingham by religion



Source: Census 2011 ONS QS210EW

In contrast, just 2.9% of Sikhs live in areas classified as the 20% least deprived areas in Birmingham. This is a larger proportion compared to Buddhists (2.1%) but smaller than those who identify as Christian (4.4%).

Figure 11: Proportion of people living in the 20% least deprived areas of Birmingham



Source: Census ONS QS210EW

Linking deprivation with evidence about life expectancy and healthy life expectancy in England:

45.7% of Sikhs in Birmingham who lived in the 20% most deprived areas can expect to spend

- Nearly 20 fewer years in good health
- Spend a third of their lives in poor health
- Live on average 9 years fewer Than the 2.9% of Sikhs living in the 20% least deprived areas.^{(62),(63)}

The local and national evidence to support life expectancy and healthy life expectancy is very limited because Census data does not collect life expectancy data at a religion level.

3.9. Contributing to a green and sustainable Future

Contributing to a green and sustainable future Key Findings:

- A growing number of Sikhs follow Guru Granth Sahib's respect and responsibility towards creations by contributing towards repairing the environment in a variety of ways...
- Since 2010, Sikhs have been observing the Sikh environment day on March 14th
- Sikh Environment day involves promoting the relationship between Sikhism and the environment, by for example local environment clean up or plant trees

Sikhs honour Gurus wisdom, believing that all humans have an intrinsic sensitivity to the natural world and that a sustainable, more just society is possible, where water, air, land, forests and biodiversity remain vibrant for future generations.⁽⁶⁴⁾

From the published research, there is evidence that:

- Sustainability frameworks should draw upon the teaching of Sikh Gurus to create an integrated whole systems approach across time and space⁽⁶⁵⁾
- Eco-Sikh, a charitable organisation with seeks to find a response to the threats of climate change and the deterioration of the natural environment, encourage families and communities to learn about environmental issues and participate in green initiatives⁽⁶⁶⁾
- The Sikh community hold numerous earth initiatives, including planting native trees and installing bird and bat boxes.^{(67),(68),(69)}

3.10. Mitigate the legacy of Covid

Mitigating the legacy of Covid Key Findings:

- More exposure to people at work; living in large households and living in more deprived areas may have contributed to the impact of Covid-19 among Sikh communities
- Sikh males are more likely to die of covid-19 compared to men with no religion and Christians (**31.29 per 100,000**)
- Sikh women and are more likely to die of covid-19 compared to with no religion and Christians (**14.1 per 100,000**)
- **47%** of all deaths among Sikhs in the West Midlands were due to Covid-19 by the end of March 2019.

Sikh women have higher mortality rates from Coronavirus deaths when compared with their Christian counterparts (14.1 per 100,000 compared to 7.08 per 100,000).⁽⁷⁰⁾ Similarly, Sikh men have significantly higher mortality rates than their Christian counterparts (31.29 per 100,000 compared to 9.59 per 100,000).⁽⁷⁰⁾

From the published evidence, there is evidence that:

- 47% of all Sikh deaths in the West Midlands were due to Covid-19 by end of March 2019. This increased to 60% by mid-April 2020, more than twice the national average.⁽⁷¹⁾ However, this statistic has been derived directly from Sikh and Asian funeral directors and Sikh Gurdwaras and has not been peer reviewed
- 96% of Sikhs were concerned with the high proportion of deaths in the Sikh community as a result of Covid-19⁽⁷²⁾
- The Sikh population may have been disproportionately affected from Covid-19 due to their prevalence of living in large households.

Because of limitations in faith data collection surrounding Covid-19, there is limited evidence to understand the experiences of the Sikh population in the context of Covid-19 vaccination hesitancy.

4. Appendices

Appendix 1: Inclusion / Exclusion Criteria

Age group	Language	Publication type	Availability	Time limit
Any	English	Peer reviewed, high quality grey literature including policy reports and evaluations of interventions.	Full -text articles, include DOI/HTML links	Published literature from last 20 years (can go back 5-10 years longer if results too limited)

Appendix 2: Search Strategies

Getting the best start in life	Mental wellness and balance	Healthy and affordable food	Active at every age and ability	Working and learning well
General: “Sikh” and “children” or “young people” or “youth” or “child” or “babies” or “childhood” Specific: “Sikh” and “vaccination” or “measles” or “obesity” or “health check” or “maternity”	General: “Sikh” and “mental health” or “mental” or “health” or “wellbeing” or “wellness” or “access” or “balance” Specific: “Sikh” and “mental illness” or “depression” or “suicide” or “shame” or	General: “Sikh” and “food” or “diet” or “obesity” or “meat” or “vegetarian” Specific: “Sikh” and “common food” or “festival food” or “langar” or “food served at Gurdwara” or “dietary laws” or “food practices” or “traditional food” or “obesity”	General: “Sikh” and “physical activity” or “activity” or “exercise” Specific “Sikh” and “vigorous	General: “Sikh” and “working” or “education” or “housing” or “living” or “economic activity” or “general health” or “health” or “illness” or “disability” or “long term disability” or “long standing health”

care" or "breast feeding" or home visits" or "rituals" or "vaccine" or pertussis vaccine" or "belonging" or "bullying" or "hate crime" or "fostering" or "care"	"stigma" or "stress" or "racial harassment" or "honour" or "disability" or "alcohol" or "drinking" or "abstention" or "drinking frequency" or "drinking intensity" or "alcohol problem" or "alcohol support" or "alcohol consumption" or "substance abuse" or "addiction" or "tobacco" or "cannabis" or "recreational drugs" or "drugs" or "smoking" or drug use"	or "physical activity" or "overweight" or "BMI" or "weight" "Waist Height Ratio"	exercise" or "moderate exercise" or "walking" or "running" or "sports" or "cardiovascular" or "elderly exercise" or "health promotion"	Specific: "Sikh" and "apprenticeships" or "Level 1,2,3,4 qualifications" or "degree" or "NEET" or "secondary school" or "primary school" or "full time education" or "profession" or "career choice" or "household income" or "home ownership" or "Bad health" or "learning disability" or "hearing impairment" or "communication impairment" or "PCOS"
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Protect and Detect	Ageing well and dying well	Closing the gaps	Contributing to a green and sustainable future	Mitigate the legacy of COVID
General: "Sikh" and "protect" or "detect" or "cancer screening" or "cancer" or "screening" or "screening uptake" or "vaccination" or "sexual health"	General: "Sikh" and "diabetes" or "ageing" or "dying" or "cardiovascular disease" or "cancer" or "dementia" or "end of life" Specific: "Sikh" and "type 2 diabetes" or "type 1 diabetes" or	General: "Sikh" and "deprivation" or "life expectancy" or "home ownership" or "male vs female" or "wage" Specific: "Sikh" and "deprived areas" or "healthy life expectancy" or "health"	General: "Sikh" and "sustainability" or "green future" or "sustainable" or "environment" Specific: "Sikh" and "recycling" or "environmentally friendly" or "tree planting" or	General: "Sikh" and "COVID" or "COVID impacts" or "COVID legacy" or "vaccination uptake" or "infections" or "COVID Deaths"

<p>Specific: “Sikh” and “HIV” or “STI” or “sex education” or “HPV” or “transmission” or “vaccine” or “colonoscopy” or “cervical cancer” or “cancer detection”</p>	<p>“dietary practices” or “psychosocial factors” or “depression” or “CHD” or “heart disease” or “negative support” or “social networks” or Chronic Obstructive Pulmonary Disease” or “cancer risk” or “oral cancer” or “lung cancer” or “Alzheimer’s” or “stigma” or “death” or “end of life care” or “advance care planning”</p>		<p>“sustainable development” or “energy consumption”</p>	<p>Specific: “Sikh” and “mortality rate” or “religious deaths” or “willingness to vaccine”</p>
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Appendix 3: Expert knowledge/Opinion from Organisations

providing substance misuse and related health issues services in

Birmingham

Sikh Community – Dependant Drinkers
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From CGL:

QEH

Charlie Parker – clinical Nurse Specialist in Addiction Psychiatry (QEH)

'I think we feel that BAME groups are often underrepresented but a lot of alcohol related admissions would come under gastro and other specialities not necessarily liver.

Our experience is often that perhaps due to language barriers and other cultural issues they are not always well served and can be harder to engage.

Dr Rajarata wants to look at the numbers of BAME patients coming to liver clinic here and how many we refer for transplant then extend this to other hospitals in the region.'

QEH/Liver clinics:

Sabrien Bibi (CGL Hospital Worker)

'I have had a few Sikh drinkers at the clinic, however not many referrals during pandemic.

The Sikh drinkers tend to drink the spirits and present seriously unwell with severe liver damage. They are often diagnosed with diabetes due to their alcohol excess.

Their families come with them to their appointments, so they don't have the chance to speak on their own. A lot of the drinking is done in secret and family are not aware how much they are really drinking.

Families don't have awareness about alcohol addiction and think that he/she can just stop.

The referrals are mainly Sikh men. A lot of the Sikh men hold full time jobs. They drink to cope with stress/ depression and anxiety. Some drop out. Some can't stop drinking as too far gone.

There is often a language barrier, and therefore families are left to deal with it on their own. It is often the family that are seeking the help rather than the patient'.

QEH

Dr. Neil Rajoriya (Consultant Physician in Liver Transplantation Medicine)

'We have been looking at this dataset for QE at present - no full results available yet.

There are a minority of patients in our liver clinic from a Sikh background however this group are well represented from inpatient admissions I would say'.

Sandwell and City Hospital

Helen Taylor CPM /NMP (Lead Nurse, Homeless Pathway Team)

' we see a lot of middle-aged/older Sikh Men (aged between 45years – 65 Years) presenting at Hospital with alcohol related health issues. We often come across Sikh (alcohol) Patients that are experiencing relationship breakdowns/ divorced.

Most of the drinkers mentioned reside in the Handsworth and Smethwick areas, and we come across some of the drinkers are residing in a shared hostel on Soho Road. We are finding that they have built a community/ family within the shared accommodation. This has then prevented them from moving onto independent living and drinking levels /patterns have then worsened.

The Sikh patients that are presenting at City/Sandwell Hospital are often in denial with their drinking, also language seems to be a barrier.

There is often poor engagement with this client group, and there has been an increase of admissions with this client group.'

CGL /MARAC

Leanne Cook (CGL Safeguarding Lead)

' There has been an increase of MARAC referrals involving Sikh Males (perpetrators alcohol and Domestic Abuse). A lot of the referrals we come across are residing in Central & West Birmingham and East of Birmingham'.

From KIKIT:

We have found Alcohol as the main issue within the Sikh Community , mostly men however we have found during lockdown an increase of women requesting advice , information and support.

Alcohol addiction is definitely an issue within the Sikh community due to cultural and religion barriers this becomes a hidden issue , at KIKIT we have designed appropriate support provision for service users and family members from the Sikh community.

We are also finding young men from Sikh community using large amounts of cocaine and cannabis , family members have been reaching out to KIKIT for support.

Current provision that is offered to Sikh service users by KIKIT

- BAME support group – Punjabi language
- Diversity in Recovery 6-week Programme
- Open access drop in – Punjabi language
- Telephone- advice , information and support

Demographics in order

Handsworth

Handsworth Wood

Aston

Lozells

Smethwick

Hallgreen

Shirley

sparkbrook

5. References:

1. BBC. Religion: Sikhism at a glance 2009 [Available from: <http://www.bbc.co.uk/religion/religions/sikhism/ataglance/glance.shtml>]. Accessed on: 9th July 2021.
2. BBC. Religions: Sikhism in Britain 2009 [Available from: <http://www.bbc.co.uk/religion/religions/sikhism/history/britishsikhism.shtml>]. Accessed on: 9th July 2021.
3. Wiebke AT, S. . A Case for PolyCystic Ovary Syndrome (PCOS) to be included within the Body Image Narrative 2021 [Available from: <https://committees.parliament.uk/writtenevidence/7874/pdf/>]. Accessed on: 9th July 2021.
4. BBC. The nature of human life in Sikhism. 2009 [Available from: <http://www.bbc.co.uk/religion/religions/sikhism/history/britishsikhism.shtml>]. Accessed on: 9th July 2021.
5. BBC. Coronavirus: The Sikh community kitchen feeding thousands. 2020 [Available from: <https://www.bbc.co.uk/news/av/uk-52966810>]. Accessed on: 9th July 2021.
6. BBC. What was the contribution of Indian Sikhs in World War One? 2021 [Available from: <https://www.bbc.co.uk/teach/class-clips-video/history-ks3-ks4-what-was-the-contribution-of-indian-sikhs-in-world-war-one/zhkdhbk>]. Accessed on: 9th July 2021.
7. BBC. British Army honours Sikh role in World War One. 2014 [Available from: <https://www.bbc.co.uk/news/av/uk-29186508>]. Accessed on: 9th July 2021.
8. Office of National Statistics. 2011 Census 2011 [Available from: <https://www.ons.gov.uk/census/2011census>]. Accessed on: 9th July 2021.
9. Office of National Statistics. Religion and health in England and Wales: February 2020. 2020. [Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/religion/articles/religionandhealthinenglandandwales/february2020>].
10. Office of National Statistics. Ethnicity and religion of the non-UK born population in England and Wales: 2011. 2011 [Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity/articles/2011censusanalysisethnicityandreligionofthenonukbornpopulationinenglandandwales/2015-06-18#religionhttp://>]. Accessed on: 9th July 2021.

11. Khalsa S. Practicing Minority Religion: Interrogating the Role of Race, National Belonging, and Gender Among Sikhs in the US and England. 2020. Doctoral dissertation, Rice University)
12. Gatrad R, Jhutti-Johal J, Gill PS, Sheikh A. Sikh birth customs. Arch Dis Child. 2005;90(6):560-3.
13. Oelke ND, Vollman AR. "Inside and outside": Sikh women's perspectives on cervical cancer screening. Can J Nurs Res. 2007;39(1):174-89.
14. The British Sikh Report. British Sikh Report 2018. An insight into the British Sikh Community. 2018 [Available from: <https://britishsikhreport.org/british-sikh-report-2018/>. Accessed on: 15th July 2021.
15. The British Sikh Report. The British Sikh Report 2020. An insight into the British Sikh Community. 2020 [Available from: <https://britishsikhreport.org/wp-content/uploads/2020/11/British-Sikh-Report-2020.pdf>. Accessed on: 9th July 2021.
16. Kumar A, Castelli A, Syal C. The unspoken alcohol problem among UK Punjabis BBC News 2018 [Available from: <https://www.bbc.co.uk/news/uk-43505784#:~:text=A%20new%20survey%2C%20commissioned%20by,about%20op only%20in%20the%20community>. Accessed on: 9th July 2021.
17. Velleman R. Alcohol prevention programmes: A review of the literature for the Joseph Rowntree Foundation (part two). 2009 [Available from: <https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/alcohol-prevention-progs-parttwo.pdf>. Accessed on: 9th July 2021.
18. The British Sikh Report. British Sikh Report 2019. An insight into the British Sikh Community. 2019 [Available from: <https://britishsikhreport.org/wp-content/uploads/2019/05/British-Sikh-Report-2019.pdf>. Accessed on: 13th July 2021.
19. Ahuja A, Orford J, Copello A. Understanding how Families Cope with Alcohol Problems in the UK West Midlands Sikh Community. Contemporary Drug Problems. 2003;30(4):839-73.
20. Orford J, Johnson M, Purser B. Drinking in second generation black and asian communities in the english midlands. Addiction Research & Theory. 2004;12(1):11-30.
21. Galvani S, Manders G, Wadd S, Chaudhry S. Developing a community alcohol support package: an exploration with a Punjabi Sikh community. 2013.
22. Taak K, Brown J, Perski O. Exploring views on alcohol consumption and digital support for alcohol reduction in UK-based Punjabi-Sikh men: A think aloud and interview study. Drug and Alcohol Review. 2021;40(2):231-8.
23. Sikh Helpline. Recent Statistics of Sikh Helpline Cases 2021 [Available from: <https://www.sikhhelpline.com/statistics/>. Accessed on: 13th July 2021.

24. BBC. Sikh Beliefs. 2009 [Available from: <https://www.bbc.co.uk/religion/religions/sikhism/beliefs/beliefs.shtml>]. Accessed on: 13th July 2021.
25. Vora AR, Yeoman CM, Hayter JP. Alcohol, tobacco and paan use and understanding of oral cancer risk among Asian males in Leicester. *British Dental Journal*. 2000;188(8):444-51.
26. Williams ED, Nazroo JY, Kooner JS, Steptoe A. Subgroup differences in psychosocial factors relating to coronary heart disease in the UK South Asian population. *J Psychosom Res*. 2010;69(4):379-87.
27. Emadian A, England CY, Thompson JL. Dietary intake and factors influencing eating behaviours in overweight and obese South Asian men living in the UK: mixed method study. *BMJ Open*. 2017;7(7):e016919.
28. Leung G, Stanner S. Diets of minority ethnic groups in the UK: influence on chronic disease risk and implications for prevention. *Nutrition Bulletin*. 2011;36(2):161-98.
29. Weston Area Health. NHS Trust. Sikhism 2021 [Available from: <http://www.waht.nhs.uk/en-GB/NHS-Mobile/Our-Services/?srcid=2008>]. Accessed on: 13th July 2021.
30. Minihane AM, Khan S, Talmud PJ, Williams DL, Wright JW, Murphy MC, et al. Lack of association between lipaemia and central adiposity in subjects with an atherogenic lipoprotein phenotype (ALP). *International Journal of Obesity*. 2000;24(9):1097-106.
31. Higgins V. Ethnic Differences in Obesity University of Manchester. 2017 [Available from: [https://www.research.manchester.ac.uk/portal/en/theses/ethnic-differences-in-obesity\(0a7714ea-c08e-46d0-b3b9-4064f3a109b6\).html](https://www.research.manchester.ac.uk/portal/en/theses/ethnic-differences-in-obesity(0a7714ea-c08e-46d0-b3b9-4064f3a109b6).html)]. Accessed on: 13th July 2021.
32. Sarkar S, Ellahi B, Zotor FB, Amuna P. Decreasing Physical Activity Levels across Religious Sikh Male South Asian Migrant Population in Kent, UK:A Public Health Concern. *Journal of Health Management*. 2017;19(4):610-24.
33. Cross-Bardell L, George T, Bhoday M, Tuomainen H, Qureshi N, Kai J. Perspectives on enhancing physical activity and diet for health promotion among at-risk urban UK South Asian communities: a qualitative study. *BMJ Open*. 2015;5(2):e007317.
34. Sport England. Home. Know your audience. Demographic knowledge. Ethnicity 2021 [Available from: <https://www.sportengland.org/know-your-audience/demographic-knowledge/ethnicity>]. Accessed on: 13th July 2021.
35. Report TBS. The British Sikh Report 2014. 2014 [Available from: <https://britishsikhreport.org/british-sikh-report-download-2014/>]. Accessed on: 13th July 2021.

36. Sidhu MS, Griffith L, Jolly K, Gill P, Marshall T, Gale NK. Long-term conditions, self-management and systems of support: an exploration of health beliefs and practices within the Sikh community, Birmingham, UK. *Ethn Health*. 2016;21(5):498-514.
37. Campbell C, Douglas A, Williams L, Cezard G, Brewster DH, Buchanan D, et al. Are there ethnic and religious variations in uptake of bowel cancer screening? A retrospective cohort study among 1.7 million people in Scotland. *BMJ Open*. 2020;10(10):e037011.
38. Palmer CK, Thomas MC, McGregor LM, von Wagner C, Raine R. Understanding low colorectal cancer screening uptake in South Asian faith communities in England – a qualitative study. *BMC Public Health*. 2015;15(1):998.
39. Szczepura A, Johnson M, Orbell S, Gumber A, O'Sullivan I, Clay D, Owen D. Ethnicity: UK Colorectal Cancer Screening Pilot- Final Report. 2003 [Available from: <http://www.cancerscreening.nhs.uk/colorectal/ethnicity-finalreport.pdf>. Accessed on: 13th July 2021.
40. Office of National Statistics. Coronavirus and vaccination rates in people aged 70 years and over by socio-demographic characteristic, England : 8 December 2020 to 9 May 2021. 2021 [Available from: <https://www.ons.gov.uk/releases/coronavirusandvaccinationratesinpeopleaged70yearsandoverbysociodemographiccharacteristicengland8december2020to9may2021>. Accessed on: 13th July 2021.
41. Marlow LA, Waller J, Evans RE, Wardle J. Predictors of interest in HPV vaccination: A study of British adolescents. *Vaccine*. 2009;27(18):2483-8.
42. Carnegie E, Whittaker A, Gray Brunton C, Hogg R, Kennedy C, Hilton S, et al. Development of a cross-cultural HPV community engagement model within Scotland. *Health Education Journal*. 2017;76(4):398-410.
43. Wagner AL, Shotwell AR, Boulton ML, Carlson BF, Mathew JL. Demographics of Vaccine Hesitancy in Chandigarh, India. *Frontiers in Medicine*. 2021;7(1062).
44. Cowan MM. The lived experiences of the Sikh population of South East England when caring for a dying relative at home. *Int J Palliat Nurs*. 2014;20(4):179-86.
45. Barnett AH, Dixon AN, Bellary S, Hanif MW, O'Hare J P, Raymond NT, et al. Type 2 diabetes and cardiovascular risk in the UK south Asian community. *Diabetologia*. 2006;49(10):2234-46.
46. Hanif W, Susarla R. Diabetes and cardiovascular risk in UK South Asians: an overview. . *Br J Cardiol* 2018;25(suppl 2):S8–S13. 2018.
47. Lawton J, Ahmad N, Hanna L, Douglas M, Bains H, Hallowell N. 'We should change ourselves, but we can't': accounts of food and eating practices amongst British Pakistanis and Indians with type 2 diabetes. *Ethn Health*. 2008;13(4):305-19.

48. Lim S, Wyatt LC, Chauhan H, Zanowski JM, Kavathe R, Singh H, et al. A Culturally Adapted Diabetes Prevention Intervention in the New York City Sikh Asian Indian Community Leads to Improvements in Health Behaviors and Outcomes. *Health Behav Res.* 2019;2(1).
49. Sidhu T, Lemetyinen H, Edge D. 'Diabetes doesn't matter as long as we're keeping traditions alive': a qualitative study exploring the knowledge and awareness of Type 2 diabetes and related risk factors amongst the young Punjabi Sikh population in the UK. *Ethn Health.* 2020:1-19.
50. Muilwijk M, Ho F, Waddell H, Sillars A, Welsh P, Iliodromiti S, et al. Contribution of type 2 diabetes to all-cause mortality, cardiovascular disease incidence and cancer incidence in white Europeans and South Asians: findings from the UK Biobank population-based cohort study. *BMJ Open Diabetes Res Care.* 2019;7(1):e000765.
51. Diabetes.co.uk. The Global Diabetes Community 2021 [Available from: <https://www.diabetes.co.uk/forum/>. Accessed on: 14th July 2021.
52. Williams ED, Kooner I, Steptoe A, Kooner JS. Psychosocial factors related to cardiovascular disease risk in UK South Asian men: a preliminary study. *Br J Health Psychol.* 2007;12(Pt 4):559-70.
53. Williams ED, Nazroo JY, Kooner JS, Steptoe A. Subgroup differences in psychosocial factors relating to coronary heart disease in the UK South Asian population. *J Psychosom Res.* 2010;69(4):379-87.
54. Martin A, Badrick E, Mathur R, Hull S. Effect of ethnicity on the prevalence, severity, and management of COPD in general practice. *Br J Gen Pract.* 2012;62(595):e76-81.
55. Broekhuizen BD, Sachs AP, Verheij TJ. COPD in primary care: from episodic to continual management. *Br J Gen Pract.* 2012;62(595):60-1.
56. Vora AR, Yeoman CM, Hayter JP. Alcohol, tobacco and paan use and understanding of oral cancer risk among Asian males in Leicester. *Br Dent J.* 2000;188(8):444-51.
57. Karbani G, Lim JN, Hewison J, Atkin K, Horgan K, Lansdown M, et al. Culture, attitude and knowledge about breast cancer and preventive measures: a qualitative study of South Asian breast cancer patients in the UK. *Asian Pac J Cancer Prev.* 2011;12(6):1619-26.
58. Jutlla K. The impact of migration experiences and migration identities on the experiences of services and caring for a family member with dementia for Sikhs living in Wolverhampton, UK. *Ageing and Society.* 2015;35(5):1032-54.
59. Uppal GK, Bonas S, Philpott H. Understanding and awareness of dementia in the Sikh community. *Mental Health, Religion & Culture.* 2014;17(4):400-14.

60. Alzheimer's Society & Healthwatch Lincolnshire. Understanding Dementia Amongst The Sikh Community- report. 2014 [Available from: https://www.healthwatchnorthlincolnshire.co.uk/sites/default/files/understanding_dementia_amongst_the_sikh_community_-_report_final_0_0.pdf. Accessed on: 14th July 2021.
61. Landa AS. What is the Public Opinion of Advance Care Planning within the Punjabi Sikh Community? Indian J Palliat Care. 2020;26(4):411-4.
62. Public Health England. Research and Analysis- Chapter 5: inequalities in health 2017 [Available from: <https://www.gov.uk/government/publications/health-profile-for-england-2018/chapter-5-inequalities-in-health>. Accessed on: 14th July 2021.
63. Office of National Statistics. Research and analysis. Chapter 5: inequalities in health. 2019 [Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthinequalities/bulletins/healthstatelifeexpectanciesbyindexofmultipledeprivationimd/2015to2017>. Accessed on: 14th July 2021.
64. BBC Bitesize. GCSE. Environment. What does Sikhism teach about the environment? 2021 [Available from: <https://www.bbc.co.uk/bitesize/guides/znnv87h/revision/3>. Accessed on: 15th July 2021.
65. Sahota PS, Sajeve M, Lemon M, Brar M. Learning from the Sikh Gurus: Improved Decision Making for More Sustainable Futures. Philosophy of Management. 2016;15(1):21-34.
66. Eco-Sikh. Eco-Sikh Five Year Plan - Summary 2009 [Available from: https://iefworld.org/fl/WindsorARCSikh_summary091020.pdf. Accessed on: 15th July 2021.
67. The Guardian. Sikhs aim to plant million trees as 'gift to the planet' 2015 [Available from: <https://www.theguardian.com/world/2019/apr/05/sikhs-sikhism-guru-nanak-550-anniversary-tree-planting>. Accessed on: 15th July 2021.
68. Sikh24.com. UK Sikhs Celebrate Sikh Environment Day in Smethwick Today. 2015 [Available from: <https://www.sikh24.com/2015/03/14/sikh-environment-day/>. Accessed on: 15th July 2021.
69. Alliance of Religious and Conservation (ARC). News and Features - Sikhs celebrate March 14th as Sikh Environment Day. 2010 [Available from: <http://arcworld.org/news.asp?pageID=382>. Accessed on: 15th July 2021.

70. Office of National Statistics. Coronavirus (COVID019) related deaths by religious group, England and Wales: 2 March to 15 May 2020. 2020 [Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/coronaviruscovid19relateddeathsbyreligiousgroupenglandandwales/2marchto15may2020>. Accessed on: 15th July 2021.
71. Singh J. How COVID-19 has impacted the Sikh Community! : The Sikh Network, ; 2020 [Available from: <https://www.thesikhnetwork.com/33021-2/>. Accessed on: 15th July 2021.
72. The Sikh Network. COVID-19 Coronavirus Impact on the UK Sikh Community. 2020 [Available from: https://archive2021.parliament.scot/S5_Equal_Opps/Sikh_Network_Covid19_Survey_Report.pdf.] Accessed on: 15th July 2021.