

# Scottish Household Survey

## Volunteering Cross-sectional Analysis: **Health and Wellbeing**



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# 1. Research Overview

# 1. Research overview.

- This presentation is one of a series of presentations that builds upon Volunteer Scotland's [time series analysis](#) of [Chapter 11](#) of the Scottish Household Survey (SHS) by cross tabulating a number of SHS fields with volunteering.

Cross-sectional presentation topics
Health and Wellbeing
Sport, exercise & outdoor activities
Culture
Household information
Caring responsibilities
Community engagement & citizenship
Neighbourhood characteristics
Other: Internet, marital status & Health Boards

- This presentation cross-tabulates a number of health and wellbeing SHS fields with volunteering.

# 1. Research overview.

- The Scottish Household Survey (SHS) is an annual survey based on a random sample of the Scottish Adult population aged 16+ (9,630 in 2016). This presentation uses data from the 2016 SHS as the full 2017 Dataset was not available at the time the analysis was completed.
- The SHS questions are split into sub-sets of questions asked to either the head of the household, the individual with the highest individual income or a randomly selected adult. The random adult subset of the SHS dataset is used for the analysis undertaken as this section contains the volunteering question.
- This presentation focuses exclusively on **Formal Volunteering** – defined as “..... *Giving up time to help any groups, clubs or organisations in an unpaid capacity*” that individuals have undertaken at least once in the past 12 months.



# 1. Research overview.

- The Health and Wellbeing fields selected for analysis are based on findings from the comprehensive literature review - [Volunteering, Health and Wellbeing, What does the evidence tell us](#) published by Volunteer Scotland. The key findings include:
  - Volunteering can lead to improvements in mental health – the strongest evidence related to the contribution of volunteering to enhanced mental health, including the alleviation of depression, reduced anxiety and stress and other more serious mental health conditions such as post-traumatic stress disorder.
  - Volunteering can enhance physical health – volunteering can improve individual’s self-rated health through the adoption of healthy behaviours such as exercise; and helping people cope with personal illness and dependency in older age.
  - Volunteering should target the excluded – there is clear-cut evidence that those subject to exclusion and disadvantage in society have the most to gain from volunteering in terms of their health and wellbeing.
- Given the importance of volunteering to the health and wellbeing of disadvantaged groups in society this presentation analyses relevant SHS health fields at a national level and provides a comparison between Scottish Index of Multiple Deprivation Quintiles (SIMD Q). SIMD Q ranks areas in Scotland on a scale of 1- Most deprived 20% of the population to 5 – Least deprived 20% of the population.

# 1. Research overview.

- Statistical methodology
  - For each of the SHS fields analysed we want to determine if there is a relationship between volunteer participation and the SHS field.
  - For example, the volunteer participation rate for those with very good health is above average and those with bad/very bad health is below average. In this case does general health affect volunteer participation rates or is this difference due to chance?
  - To test if there is a statistical relationship chi square analysis is used.
  - Chi square analysis is used as the data being analysed are categorical (data in categories), for example individuals' perception of general health is recorded in a number of different categories, very good, good, fair, bad and very bad.
  - Chi square testing allows us to test a hypothesis (a theory or question), e.g. volunteer participation is dependent on general health against the alternative hypothesis that volunteer participation is independent of general health (there is no relationship).
  - This tests whether a relationship exists between the two categorical variables analysed, for example volunteering and general health, but does not tell us whether the difference between the Scottish average participation rate and the volunteer participation rates for each individual category is statistically significant. At this stage we are identifying whether questions have a relationship between volunteering and the overall trend between categories (above or below the Scottish average). It is important for Volunteer Scotland to identify relationships with volunteering at an overall level to understand variables such as general health that have a relationship with volunteering, before undertaking more detailed thematic analysis which examines the relationships further.
  - Finally, a relationship (correlation) between the fields analysed and volunteering does not imply causation. Where we see a relationship between the variables this does not necessarily mean that one causes the other. For example a correlation between the general health of adults and volunteering does not mean that volunteering causes improved general health. Instead, it may be that those that have better general health are attracted into volunteering. We just don't know.

## 2. Scottish Household Survey (SHS) Fields for Health & Wellbeing



## 2. Scottish Household Survey (SHS) fields.

The SHS fields selected for analysis of ‘health and wellbeing’ are spilt into four sections.

Section	SHS Question	Definition	Response Categories	Sample Size
General Health	<b>Genhlth</b> : How is your health in General?	Genhlth is a self-reported measure of how individuals rate their general health, which considers overall health and does not distinguish between mental and physical health.	Responses are measured on a Likert scale with 5 categories ranging from very bad – very good.  For the analysis in this presentation responses of “I don’t know” have been excluded and the categories grouped into four: Very Good, Good , Fair and Bad / Very Bad.	9,612
Mental Health	<b>SWEMWBS</b> - Combined swemwbs score.	SWEMWBS is a short version of the Warwick–Edinburgh Mental Well-being Scale(WEMWBS). The WEMWBS was developed to enable the monitoring of mental wellbeing in the general population. The SWEMWBS uses seven of the WEMWBS’s 14 statements about thoughts and feelings. The seven statements are positively worded with five response categories from ‘none of the time’ to ‘all of the time.	Each category is assigned a score from 1-5. Total scores range from 7 to 35 with higher scores indicating higher positive mental well-being.  The average SWEMBS from the SHS dataset is 24.5 For the analysis conducted individuals are assigned to 3 categories: low (7-20), average (20.01 - 28.99) and high (29-35). The high and low categories follow the University of Warwick methodology of the average+/- 1 Standard deviation.	9,386

## 2. Scottish Household Survey (SHS) fields.

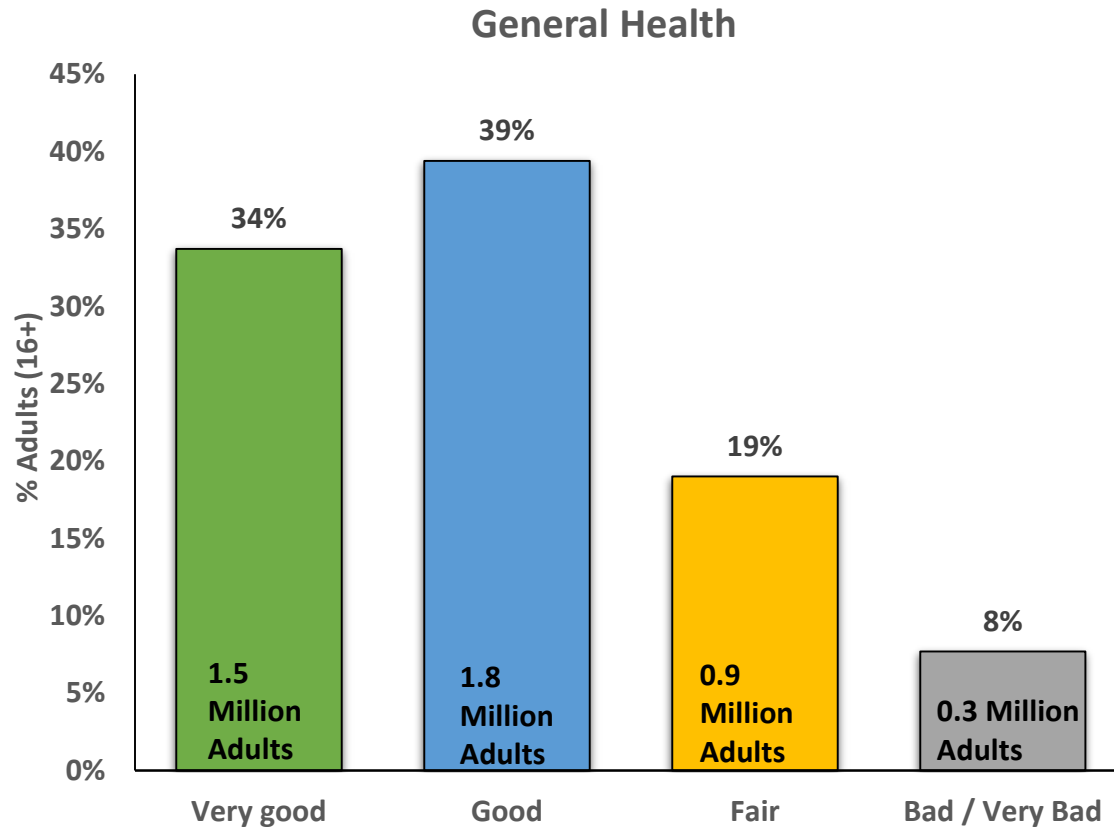
Section	SHS Question	Definition	Response Categories	Sample Size
Long term physical or mental health conditions.	<b>rg5a:</b> Do you have a physical or mental health condition or illness lasting or expected to last 12 months or more?	rg5a confirms if the random adult has a long-term health condition (lasting more than 12 months).	Response are measure as yes, no and don't know and refused. Responses of refused are excluded from this analysis.	9,620
	<b>rg5b</b> - Does your condition or illness reduce your ability to carry-out day-to-day activities?	Rg5b builds on rg5a and asks the random adult to confirm how much their long-term health condition impacts on their day-to-day activities.	Responses are measured in 3 categories, 'Yes a Lot', 'Yes a little' and 'Not at all'.	2,921
	<b>Physmen</b> - Whether anyone has a physical or mental health condition/illness at least 12 months?	Physmen extends question rg5a to ask if any member of the household has a long-term health condition.	Responses are measured as 'No – no-one' and 'Yes – someone'.	9,630

## 2. Scottish Household Survey (SHS) fields.

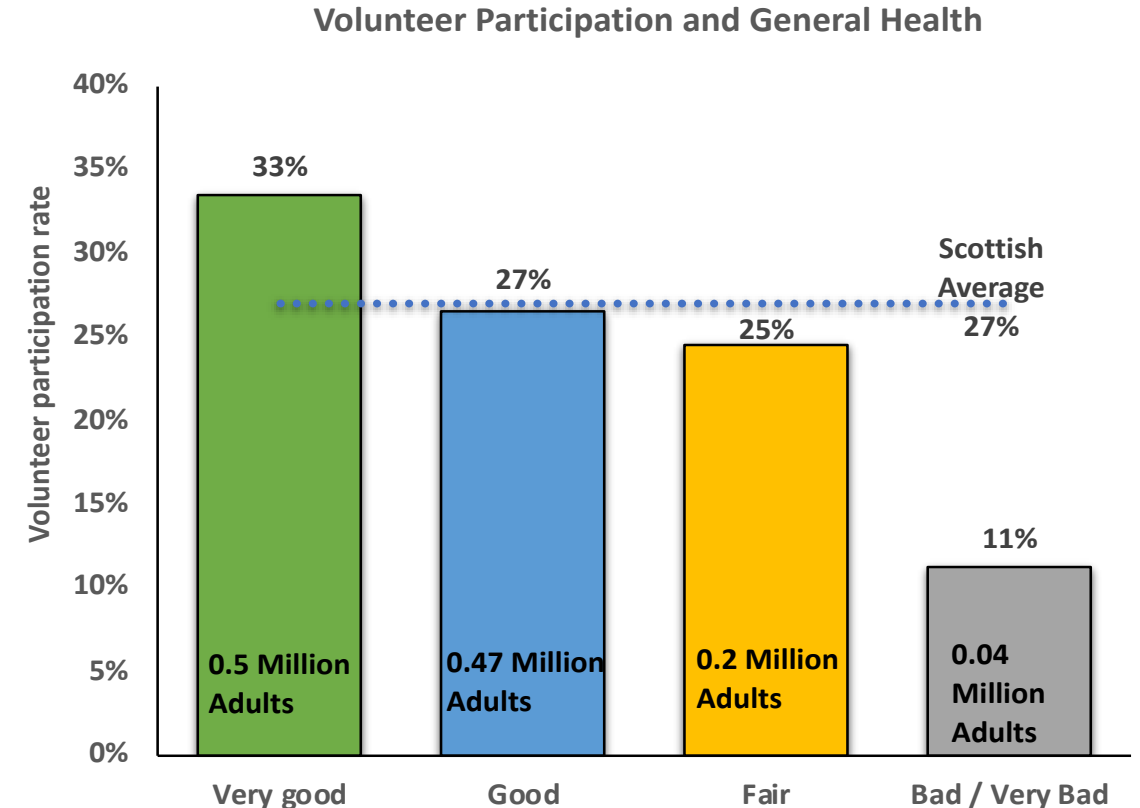
Section	SHS Question	Definition	Response Categories	Sample Size
Health Behaviours	<b>rg19</b> - Whether random adult smokes cigarettes nowadays?	rg19 is used as an example of health behaviours, where health behaviours refers to actions individuals take that can positively or negatively impact on their health.	Responses are given as yes / no.	9,630
	<b>rg2011</b> - Have you ever smoked cigarettes regularly? By regularly I mean at least one cigarette a day.	rg2011 extends question rg19 to consider whether individuals have ever smoked cigarettes.	Responses are given as yes / no.	7,847

## 3. General Health

# General Health – Scottish population



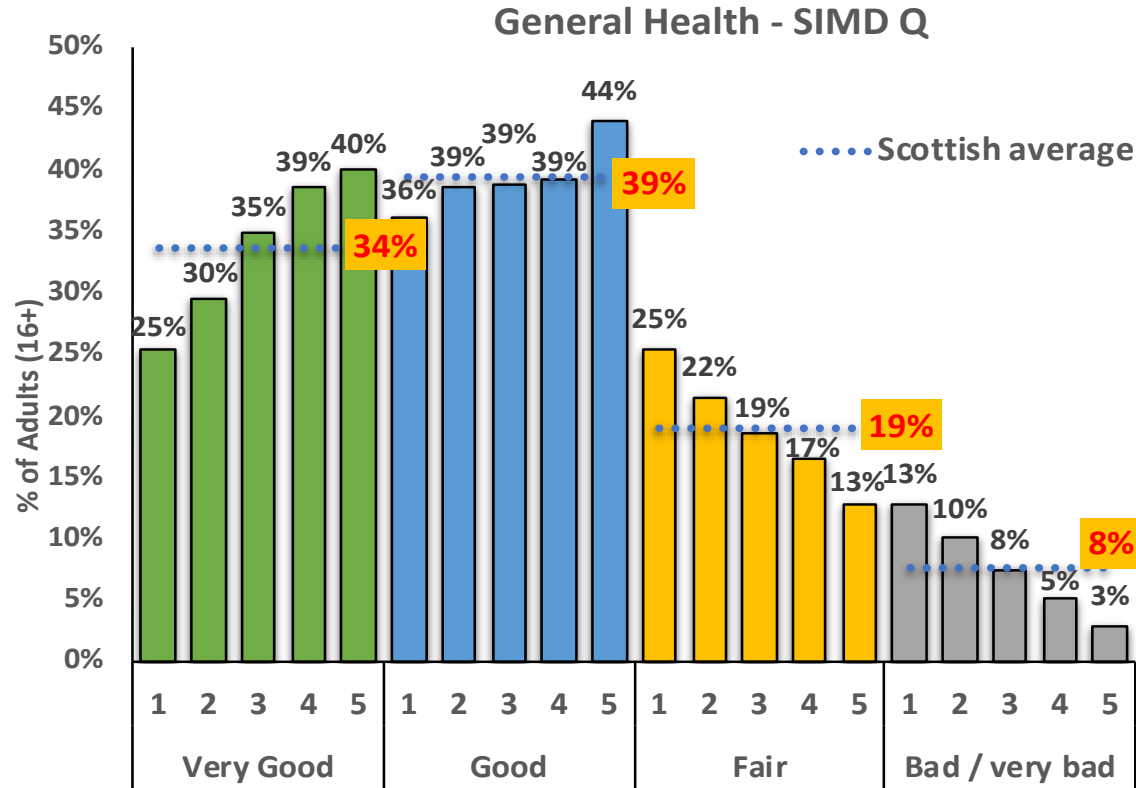
Almost three quarters of Scottish adults (73%) have a positive view of their general health (Very good or good).



Participation rates are:

- 6% higher than the Scottish average for adults who rate their health as Very good .
- 16% lower than the Scottish average for adults who rate their health as Bad / Very bad. Only 0.04 million adults in this category volunteer,

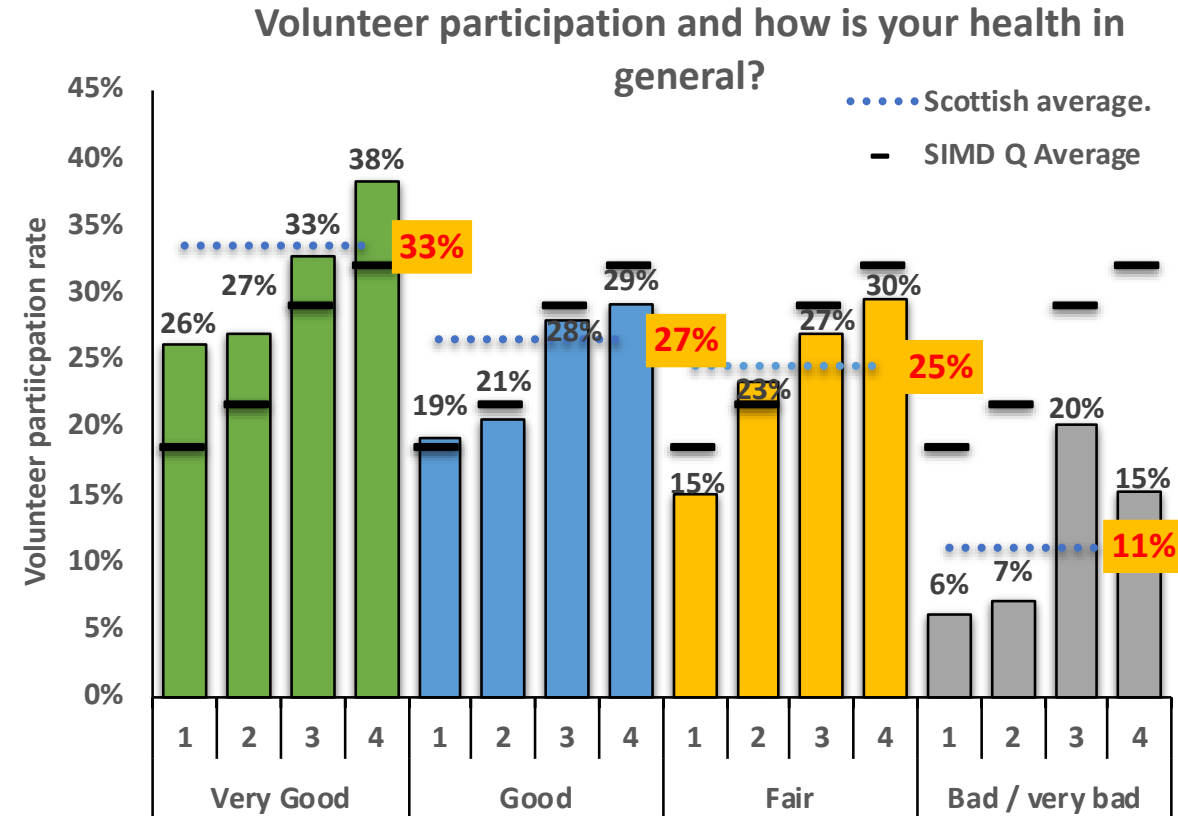
# General Health – SIMD Q



Adults in SIMD Q1 and Q2 have a more negative perception (Bad / Very Bad) of their health than the Scottish average.

Adults in SIMD Q3 to Q5 have a more positive perception (Very Good) of their general health than the Scottish average, with an increasing proportion of adults reporting positive views in the higher quintiles.

Source: Scottish Household Survey (SHS) 2016



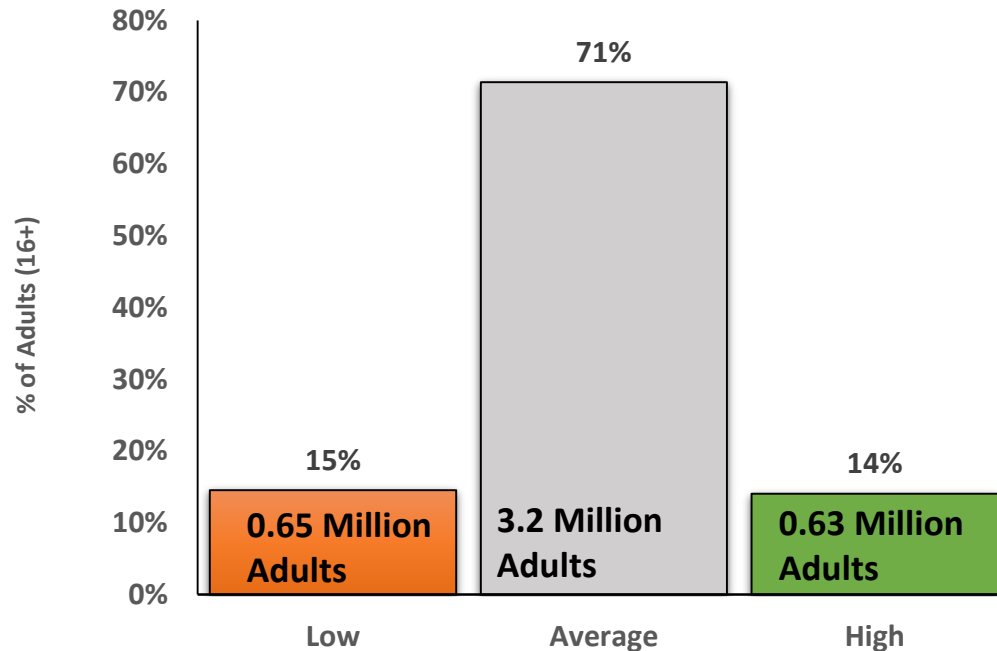
The participation rates for SIMD Q1 and Q2 are below the average Scottish participation rates for adults reporting Very Good. However the participation rates in these quintiles is higher than the overall Scottish quintile average (18% and 22% respectively).

The relationship between general health and volunteer participation is not statistically significant for SIMD Q5.

## 4. Mental Health (SWEMWBS)

# Mental Health – Scottish Population

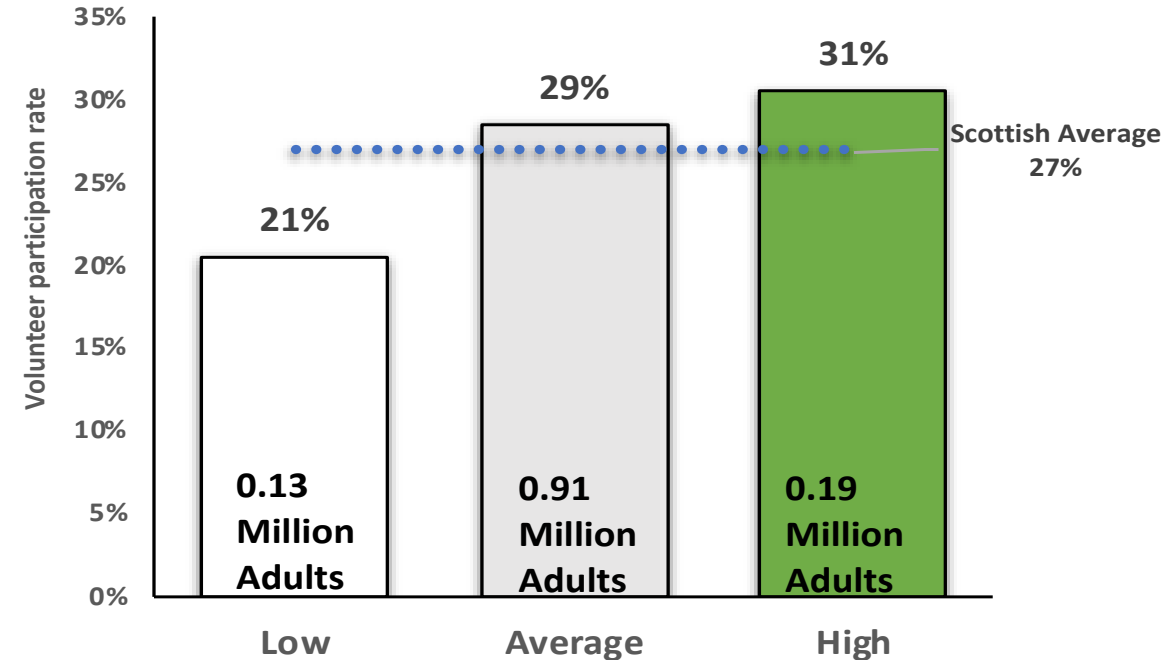
Mental Health - Scottish Population



The short version of the Warwick–Edinburgh Mental Well-being Scale (SWEMWBS) scores have been split into 3 categories: low (7-20), average (20.01 - 28.99) and high (29-35). This method of splitting the SWEMWBS score follows the University of Warwick methodology for interpretation of SWEMWBS scores.

Source: Scottish Household Survey (SHS) 2016

Volunteer participation and Mental Health Scottish Population



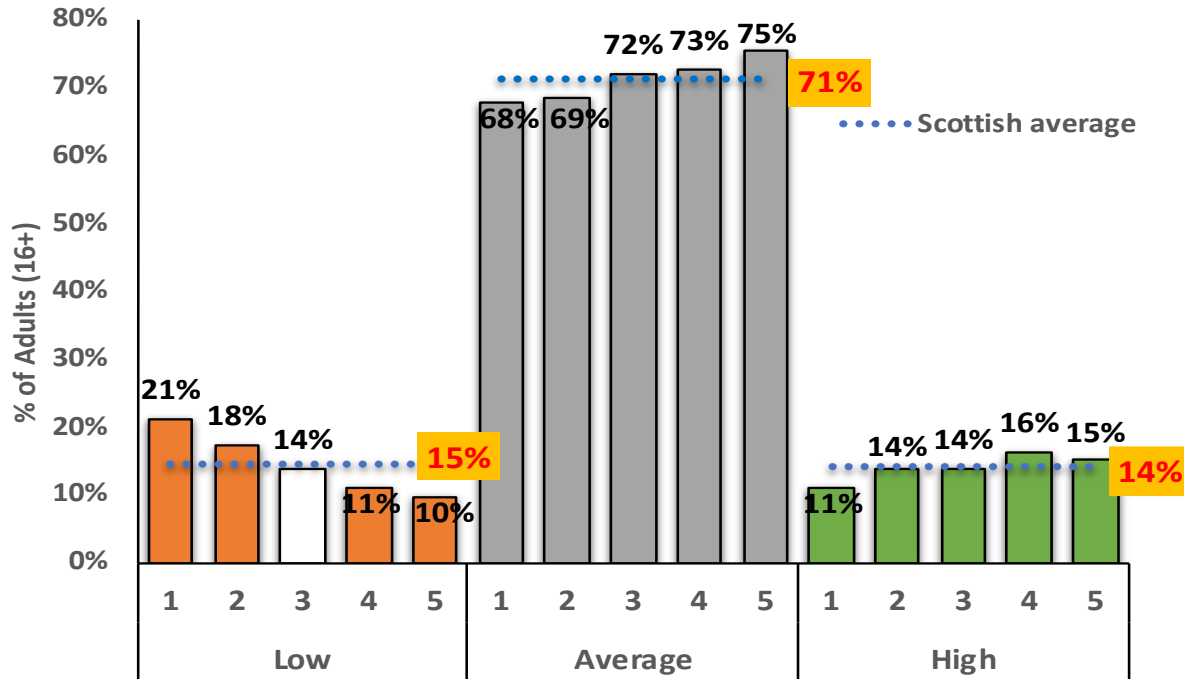
Participation rates are:

- 6% lower than the Scottish average for adults with a low SWEMWBS score.
- 2% higher than the Scottish average for adults with an average SWEMWBS score.
- 4% higher than the Scottish average for adults with a high SWEMWBS score.



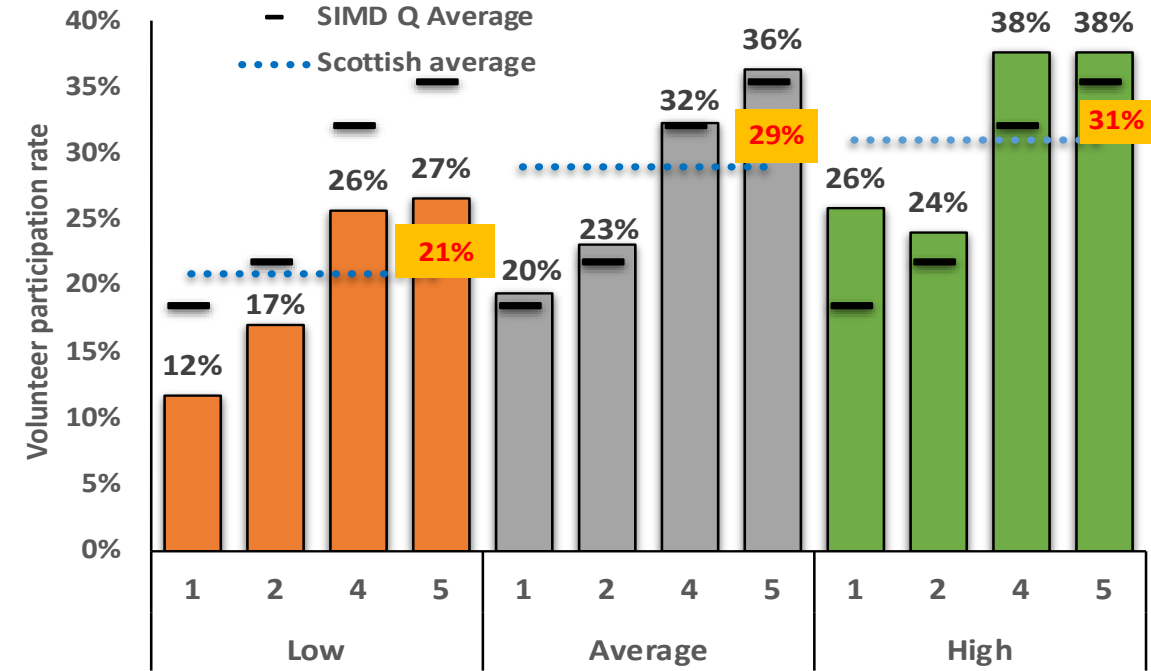
# Mental Health – SIMD Q

Mental Health - SIMD Q



Adults in SIMD Q1 and SIMD Q2 have a higher percentage of adults with a low SWEMWBS. SIMD Q1 has 6% more adults with low scores.

Volunteer Participation and Mental Health - SIMD Q



The relationship between mental health and volunteer participation is not statistically significant for SIMD Q3.

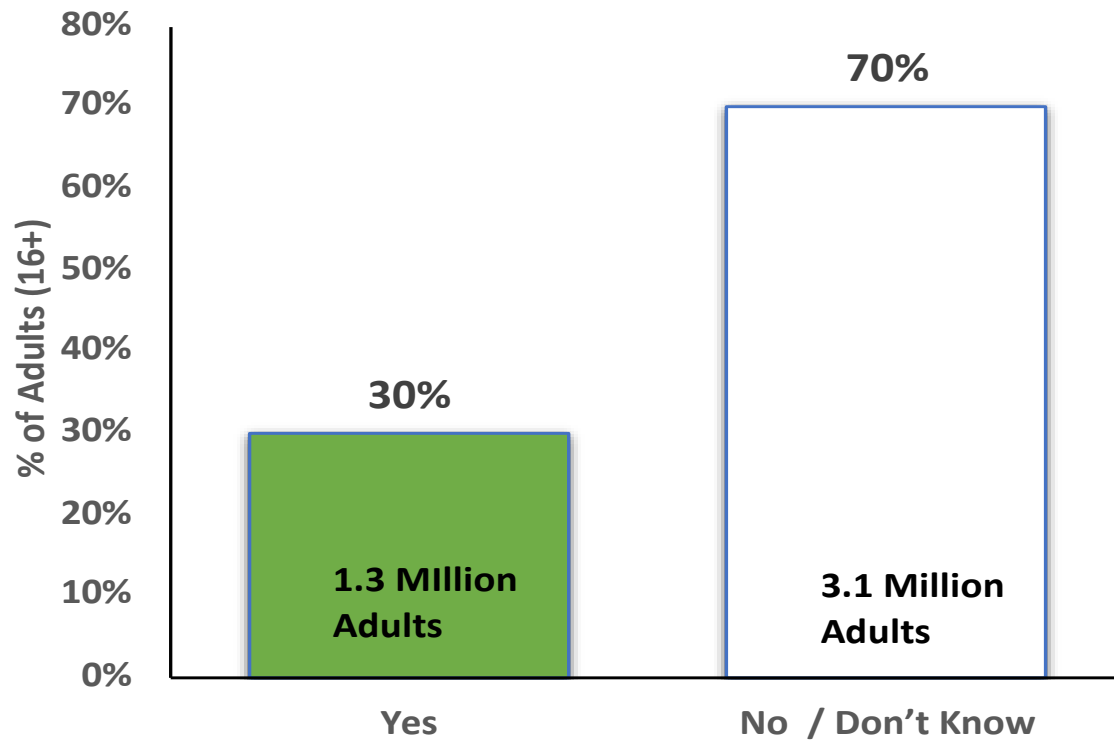
Participation rates for SIMD Q1, Q2, Q4 and Q5 are lower than their quintile average participation rate for adults with a low SWEMWBS score

The participation rates for SIMD Q1 and Q2 are below the average Scottish participation rates for adults with a high SWEMWBS score. However, the participation rates in quintiles Q1 and Q2 are higher than the overall Scottish quintile average (18% and 22%).

5. Long term physical or  
mental health conditions

# Long-term physical or mental health conditions

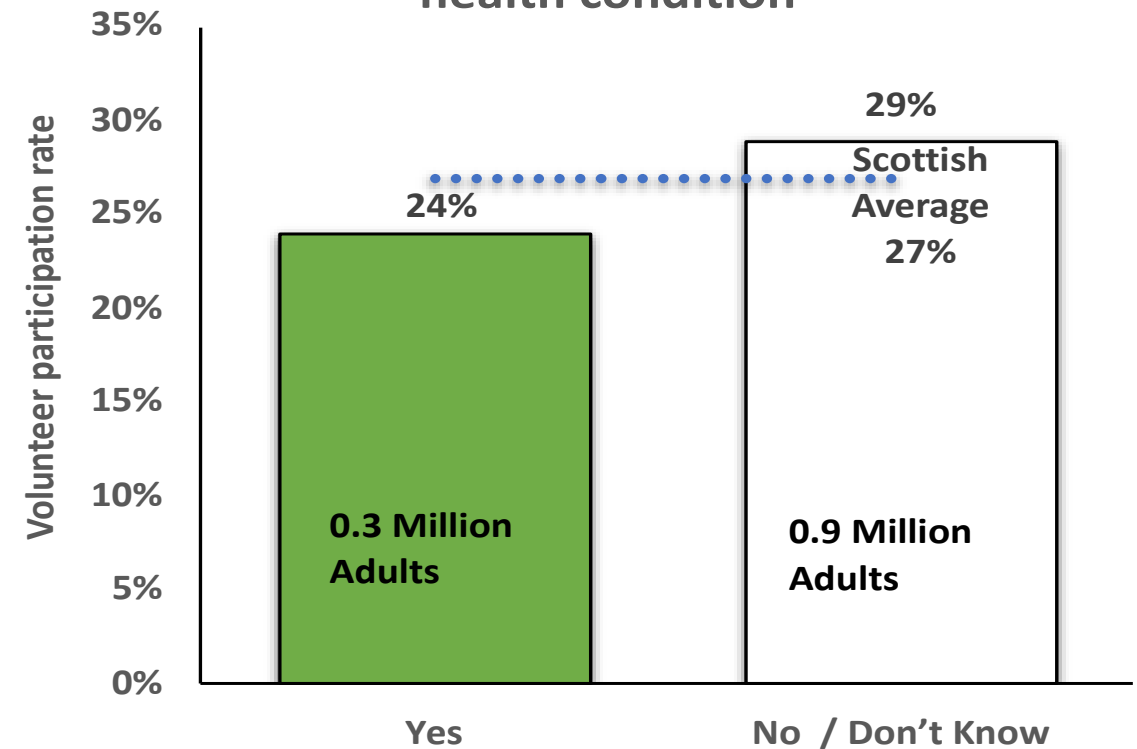
Individual health condition



Nearly a third (30%) of Scottish adults report having a physical or mental health condition lasting more than 12 months.

Source: Scottish Household Survey (SHS) 2016

Volunteer participation and Individual health condition

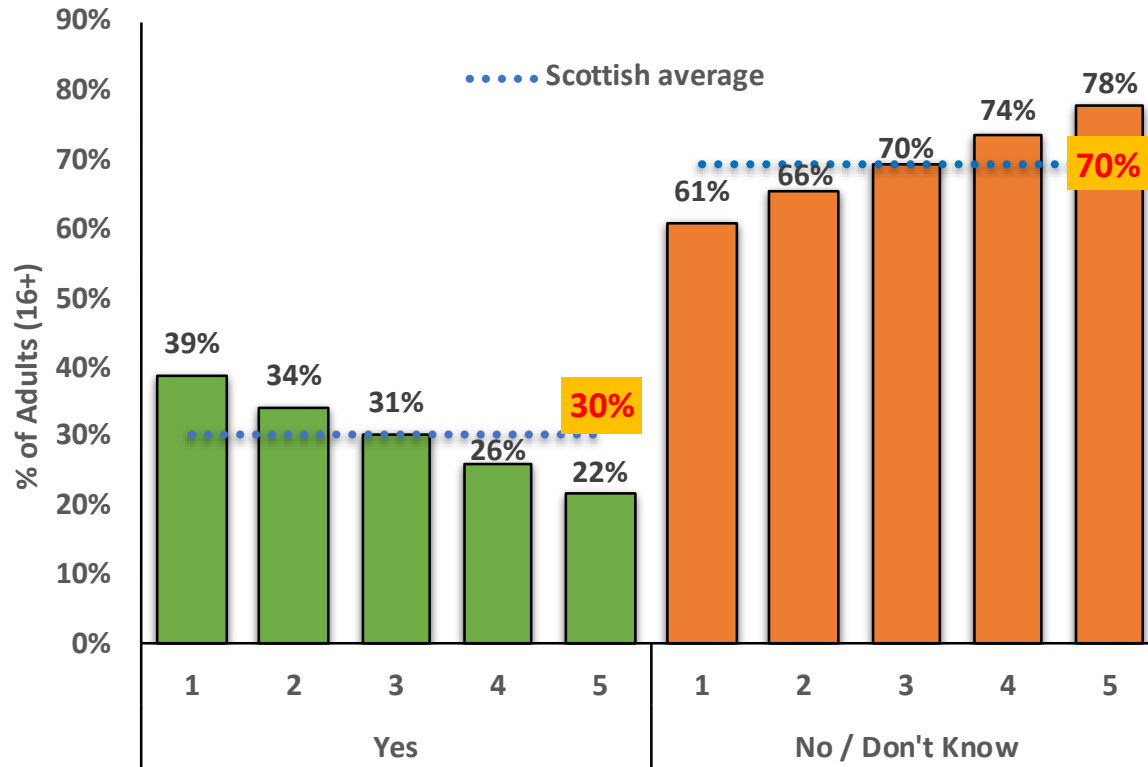


Participation rates are:

- 2% higher than the Scottish average for adults without a long-term health condition.
- 3% lower than the Scottish average for adults with a long-term health condition.

# Long-term physical or mental health conditions

Individual health condition - SIMD Q

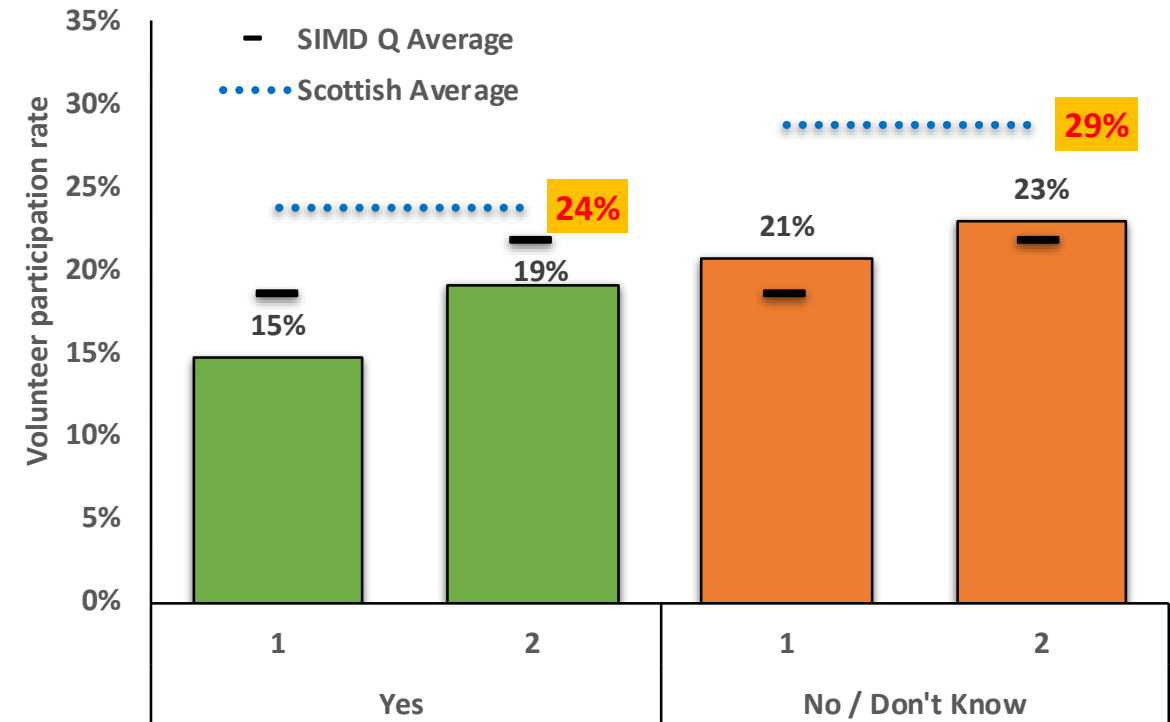


A higher percentage of adults in SIMD Q1 – SIMD Q3 report having a long-term health condition than the Scottish average .

SIMD Q4 and Q5 have less adults reporting a long-term health condition than the Scottish average.

Source: Scottish Household Survey (SHS) 2016

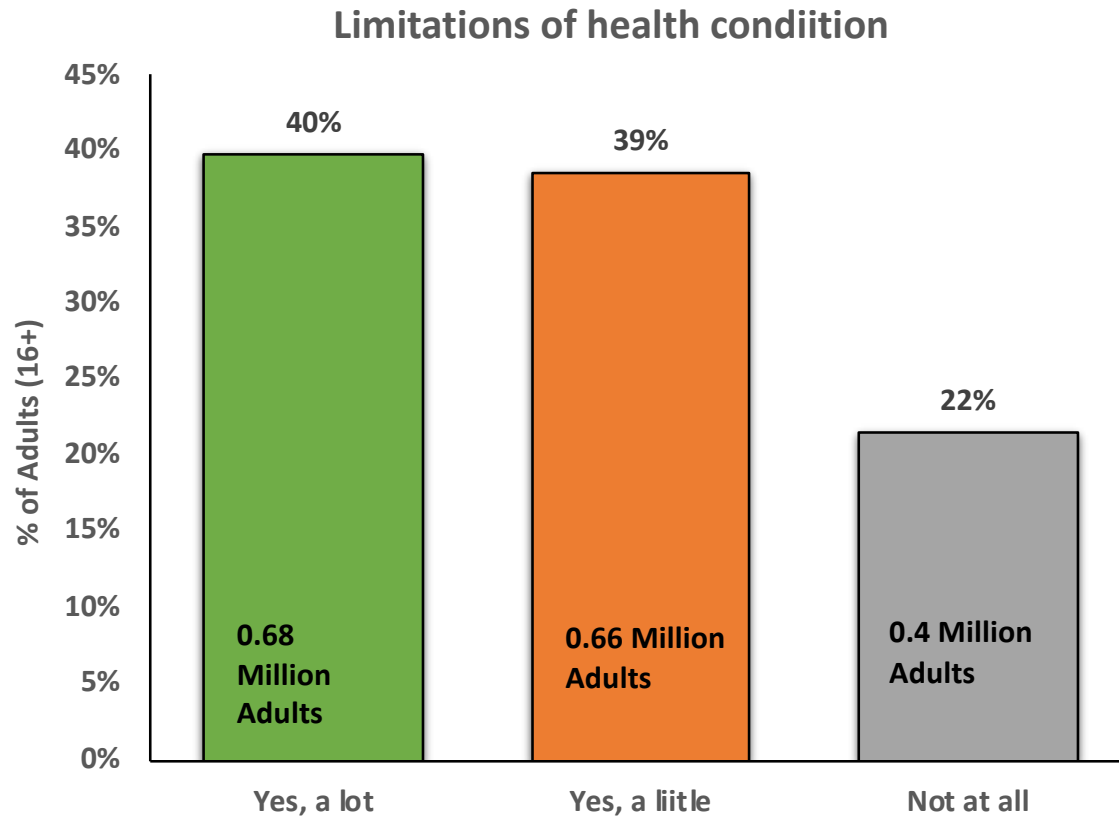
Volunteer participation and Individual health condition - SIMD Q



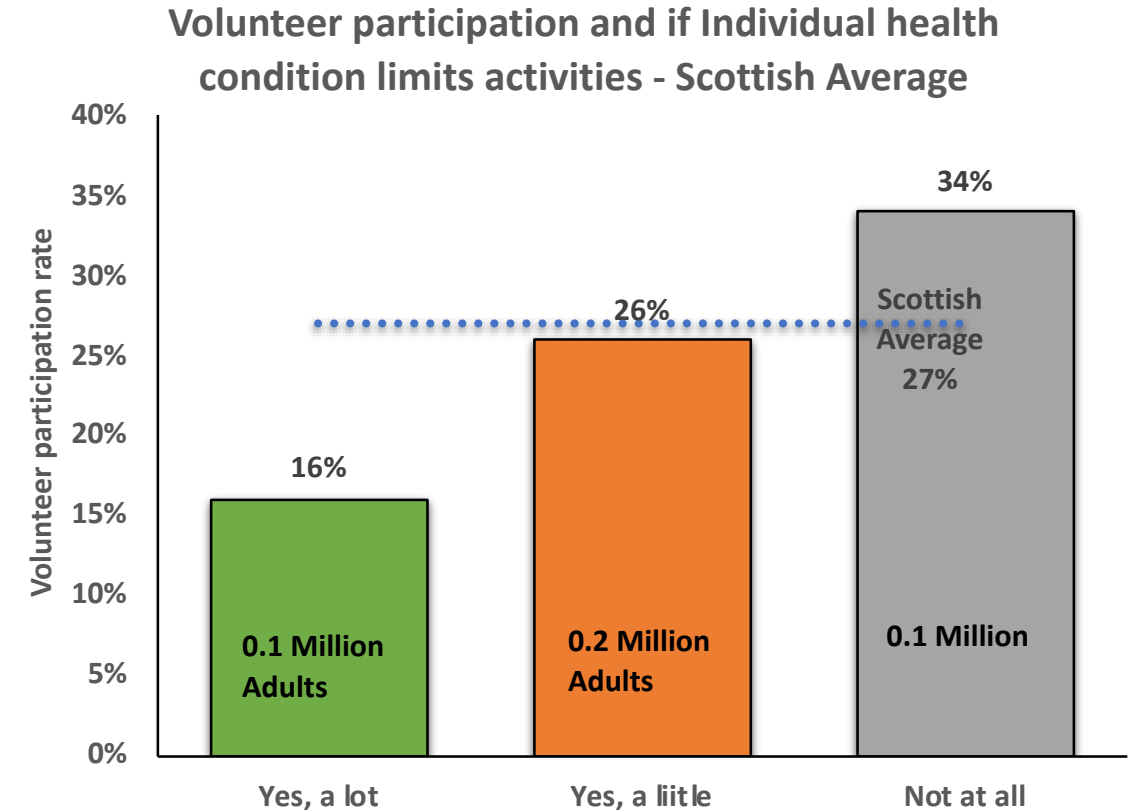
The relationship between individual health conditions and volunteer participation is only statistically significant for SIMD Q1 and Q2.

The participation rates in SIMD Q1 and Q2 are below the average Scottish participation rates for adults without a long-term health condition. However the participation rates in these quintiles are higher than the overall Scottish quintile average (18% and 22% respectively).

# Long-term physical or mental health conditions



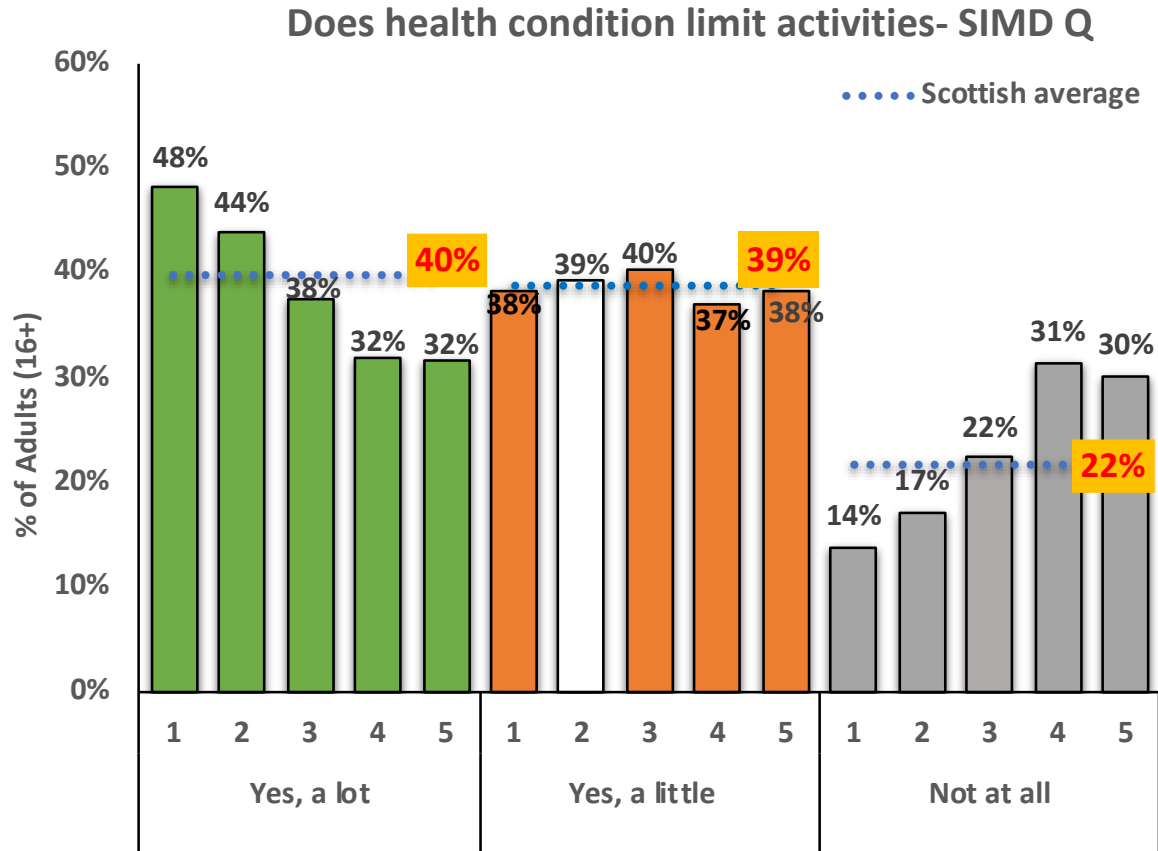
79% of Scottish adults with a long-term health condition experience a level of impact on their daily activities.



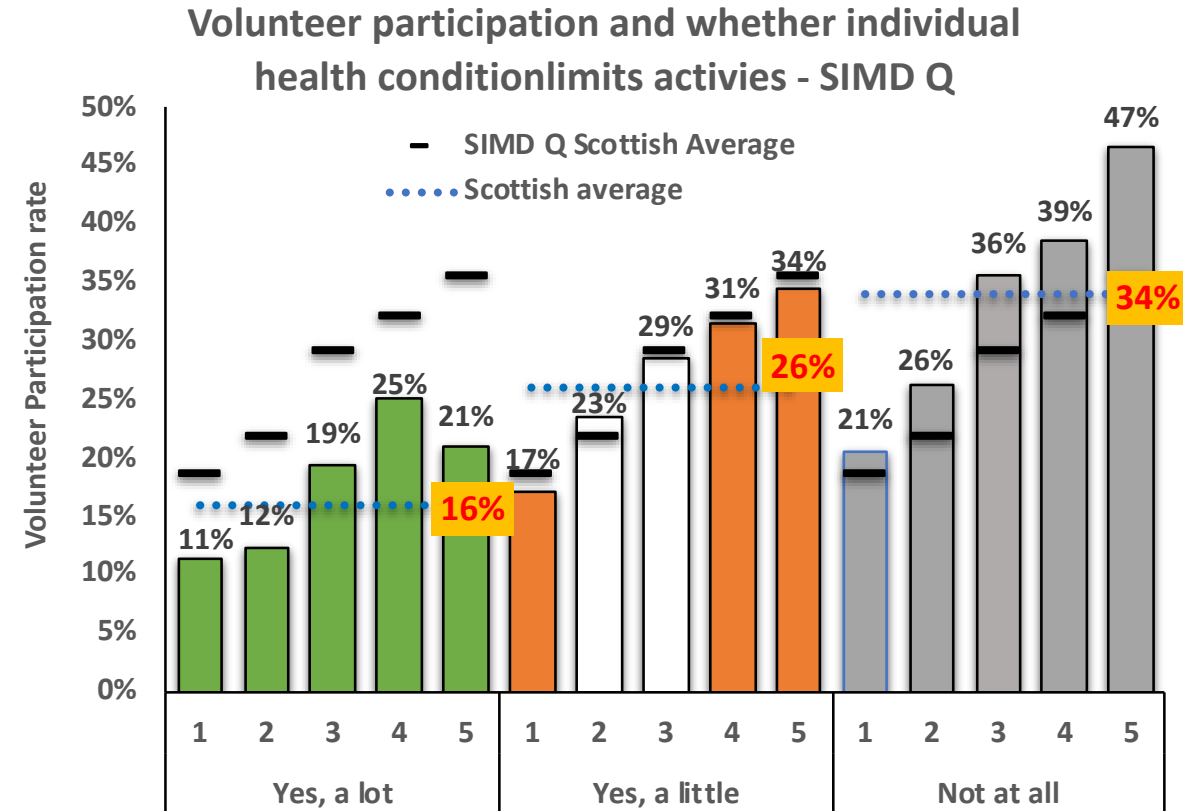
Participation rates are:

- 11% lower than the Scottish average for adults reporting that their long-term health condition impacts on their daily activities 'a lot'.
- 7% higher than the Scottish average where their condition does not limit daily activities.

# Long term physical or mental health conditions



A higher percentage of adults in SIMD Q1 and Q2 experience a lot of limitation to their daily activities than the Scottish average.

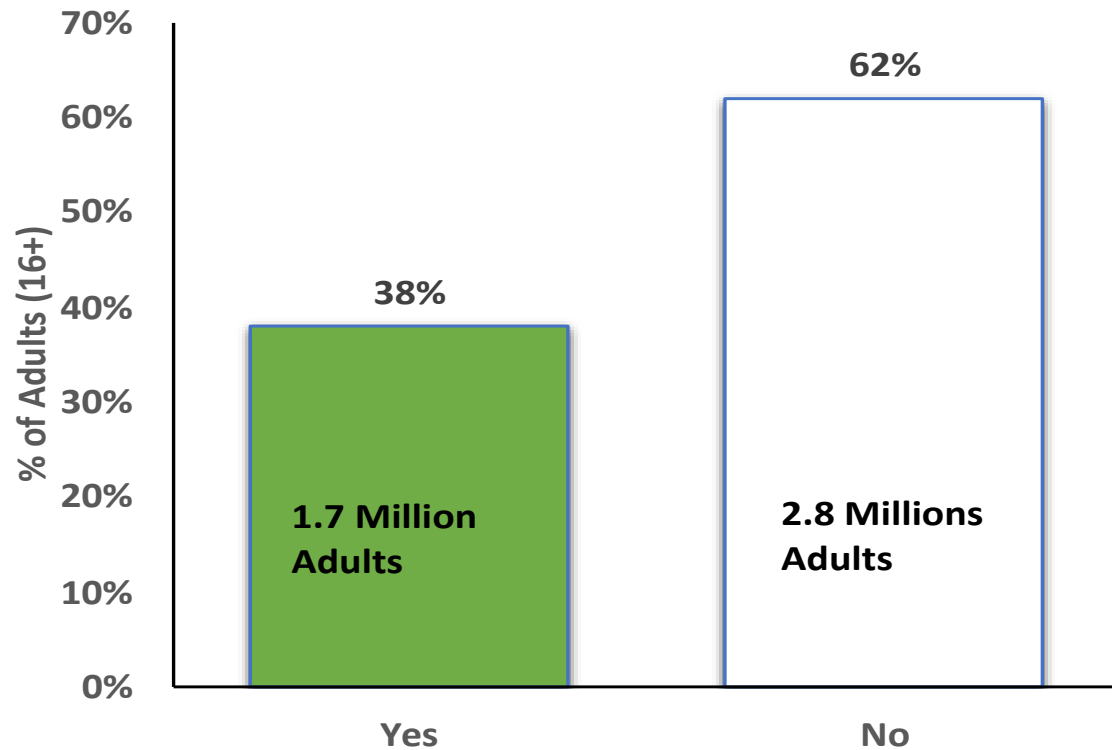


Adults in all quintiles that report a lot of impact on their daily activities have participation rates lower than their quintile average participation rates.

Conversely adults in all quintiles that report no impact on their daily activities have a participation rate higher than their quintile average.

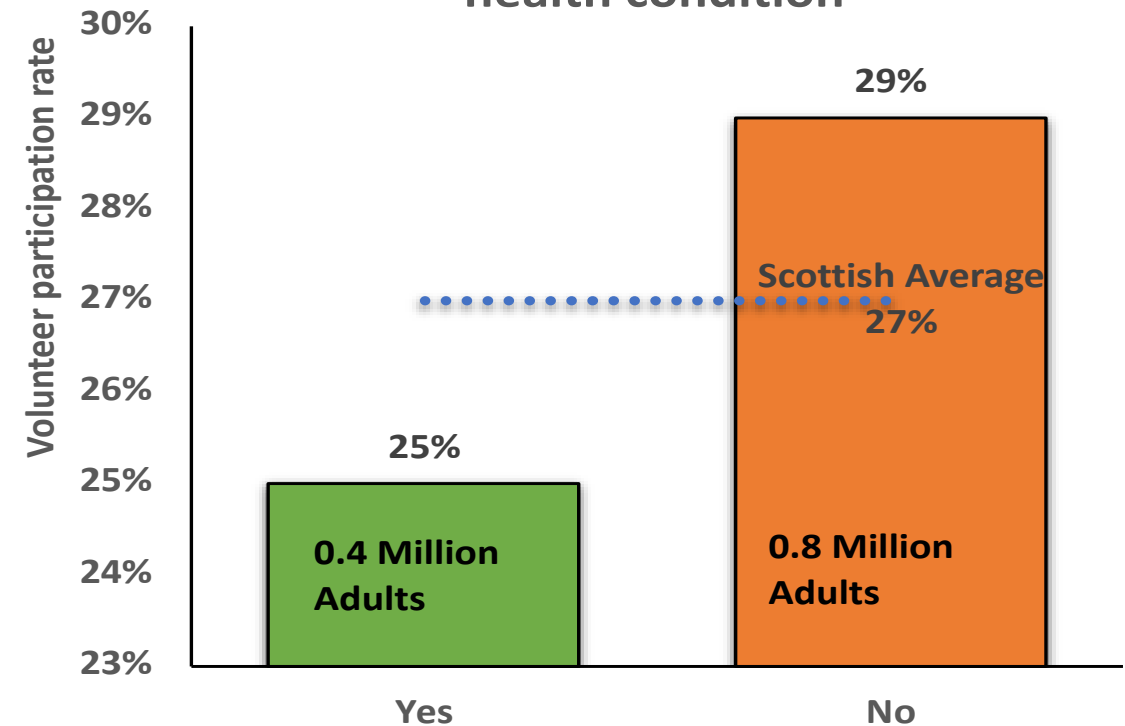
# Long term physical or mental health conditions

Household health condition



38% of households in Scotland have at least one household member with a long-term health condition.

Volunteer participation and Household health condition

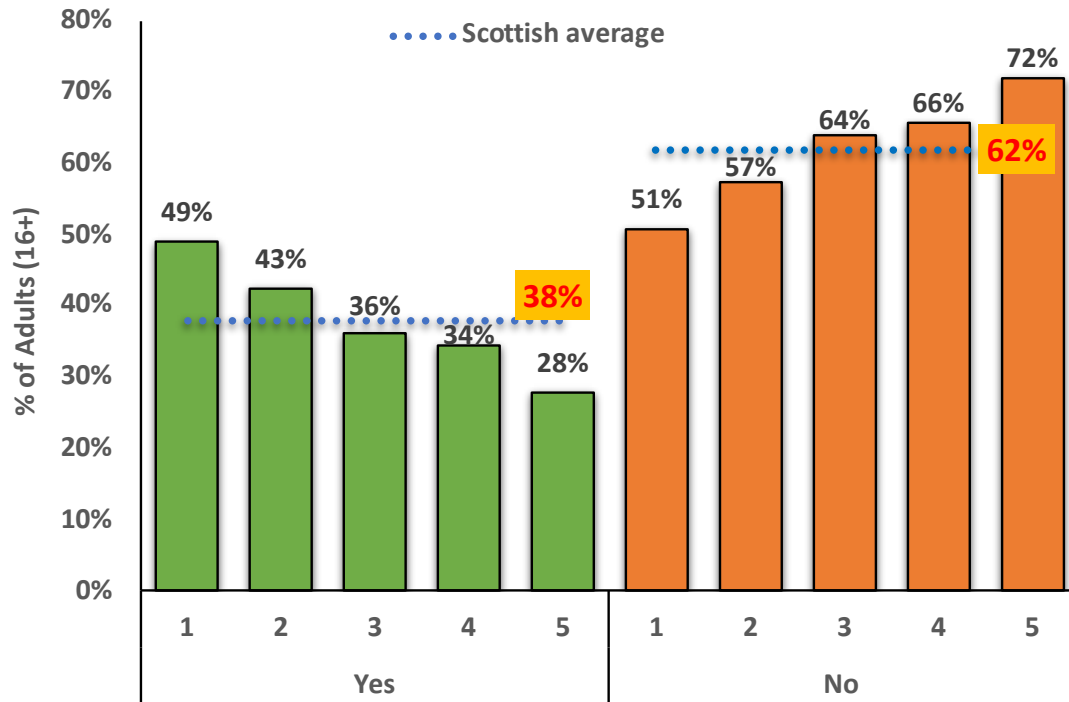


Participation rates are:

- 2% lower than the Scottish average for households with at least one household member with a long-term health condition.
- 2% higher than the Scottish average where there are no household members with a long-term health condition.

# Long term physical or mental health conditions

Household health condition - SIMD Q

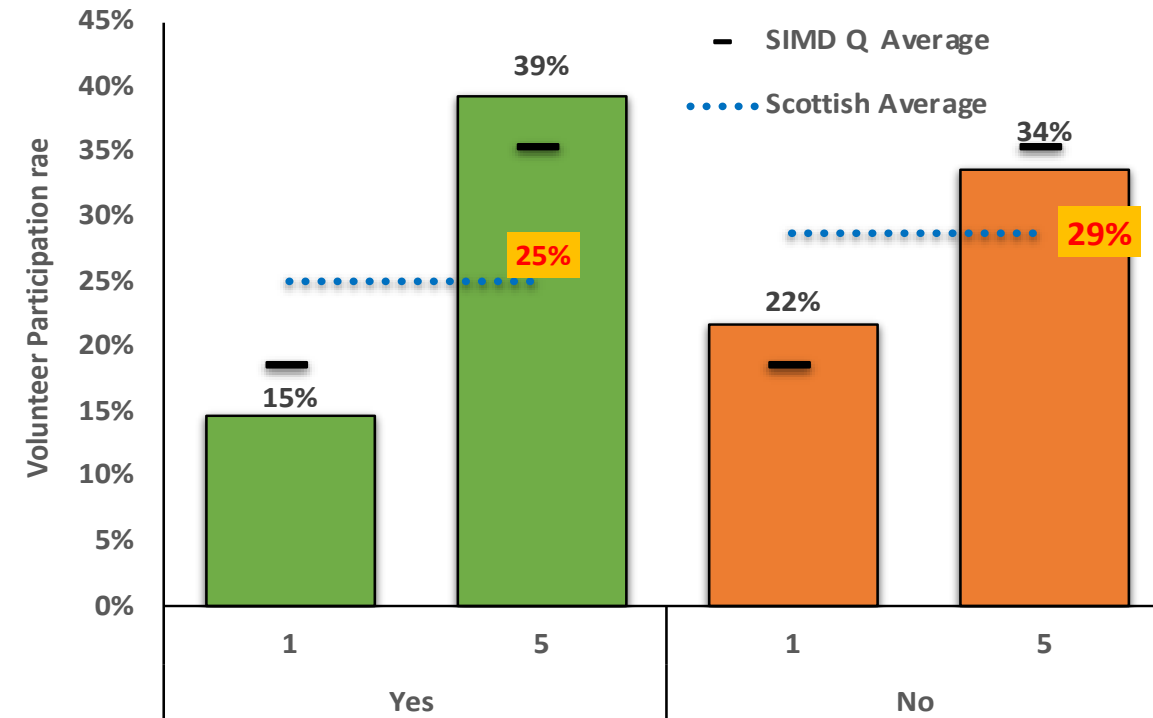


A higher percentage of adults in SIMD Q1 and SIMD Q2 have at least one household member with a long-term condition than the Scottish average.

SIMD Q3, Q4 and Q5 have a lower percentage of households with at least one household member experiencing a long-term health condition than the Scottish average.

Source: Scottish Household Survey (SHS) 2016

Volunteer participation and household member health condition - SIMD Q



The relationship between household members' health conditions and SIMDQ is only statistically significant for SIMD Q1 and Q5.

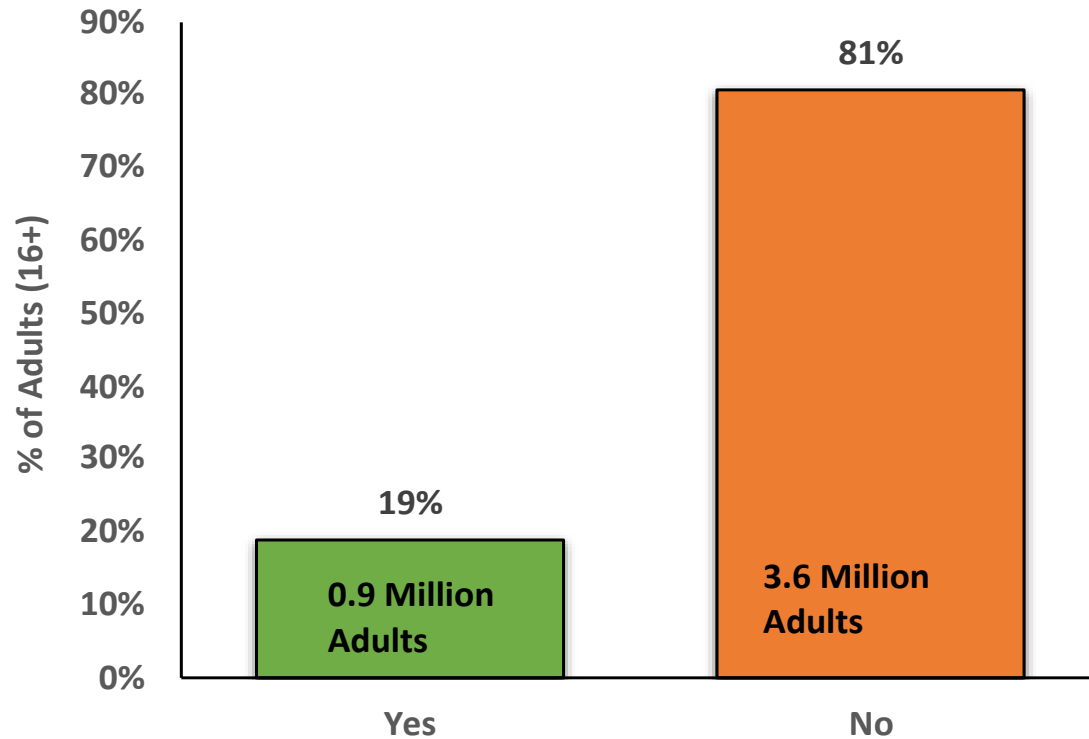
The participation rate for SIMD Q1 is above the SIMD Q1 average for households with no household members having a long-term health condition and below the quintile average for SIMD Q5.



## 6. Health Behaviours

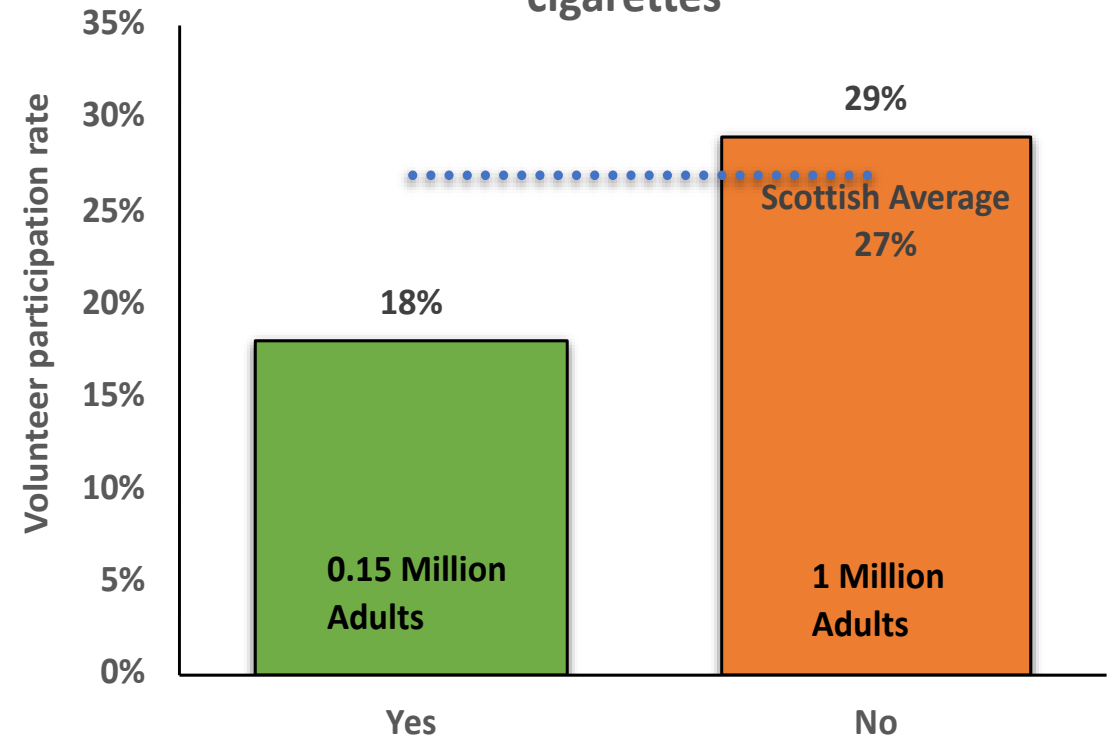
# Health Behaviours

Currently smokes cigarettes



19% of the Scottish population currently smoke cigarettes.

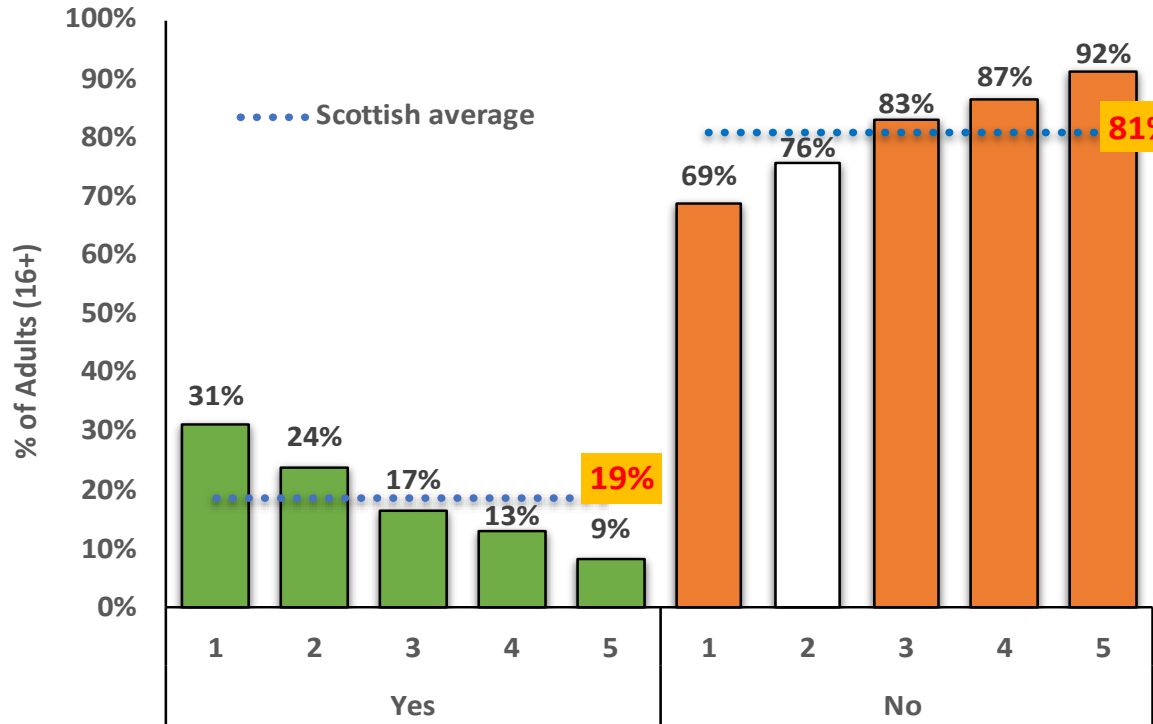
Volunteer participation and currently smokes cigarettes



The participation rate for adults who smoke cigarettes is 9% lower than the average Scottish participation rate.

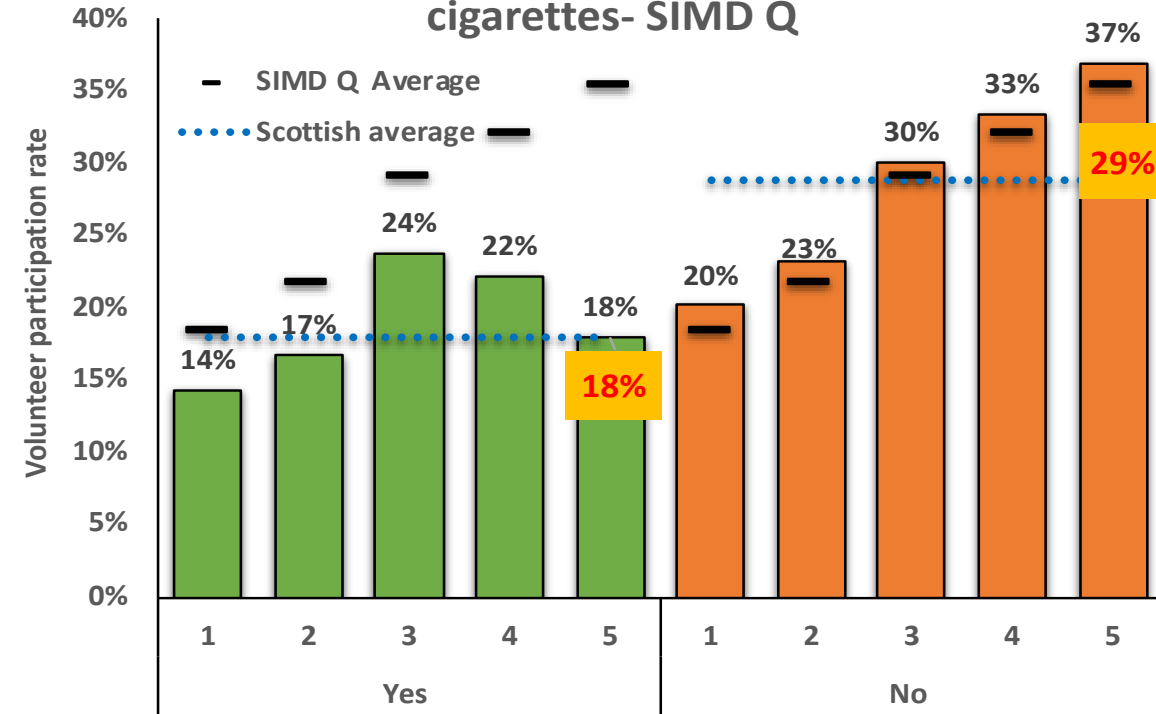
# Health Behaviours

Currently smokes cigarettes- SIMD Q



The percentage of adults in SIMD Q1 that smokes cigarettes is 12% higher than the Scottish average, while SIMD Q5 is 10% lower.

Volunteer participation and Currently smokes cigarettes- SIMD Q

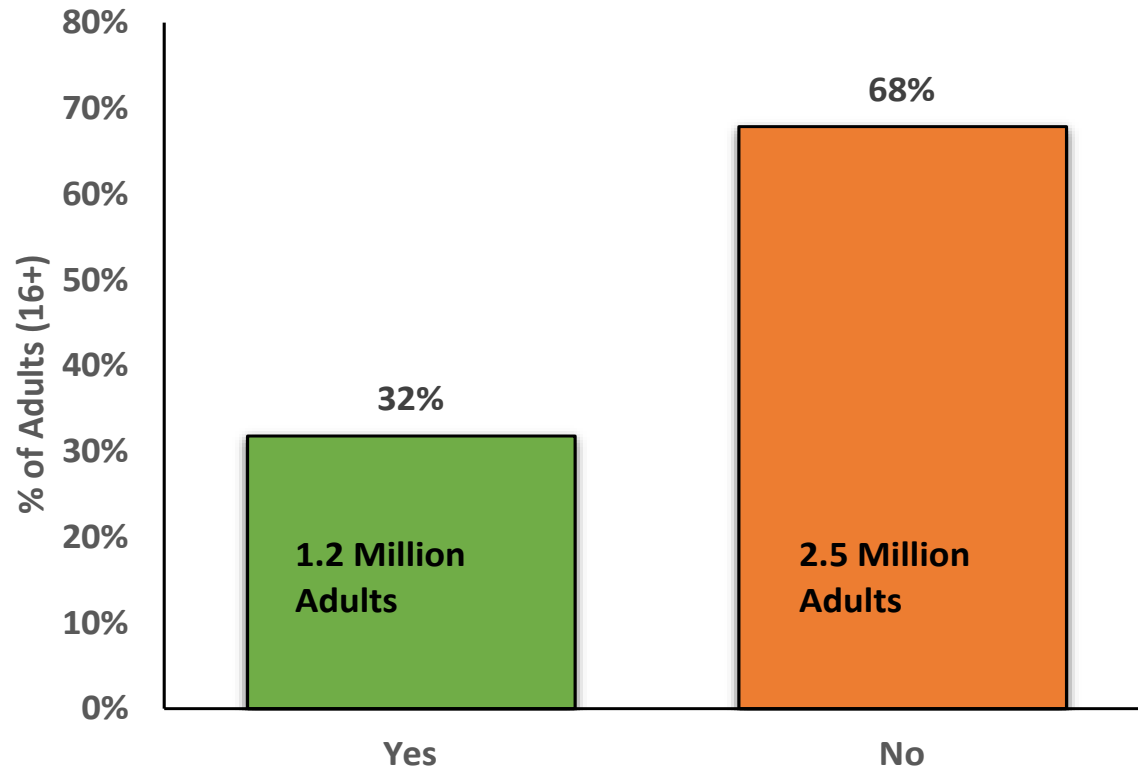


Participation rates are lower than the quintile average participation rate for all quintiles where adults smoke cigarettes.

The participation rates for SIMD Q1 and Q2 are below the average Scottish participation rates for non-smokers. However the participation rates in these quintiles is higher than the overall Scottish quintile average (18% and 22% respectively).

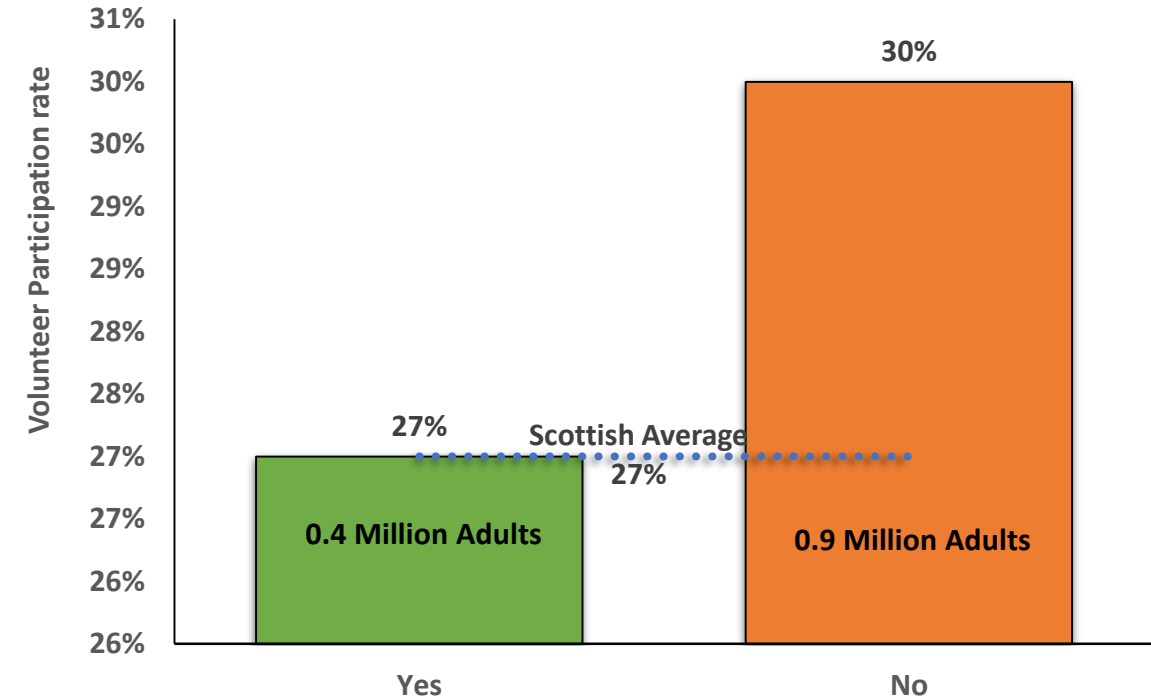
# Health Behaviours

Has ever smoked cigarettes



Almost one third of Scottish adults have regularly smoked cigarettes at some point in their lives.

Volunteer participation and has ever smoked cigarettes - Scottish Average

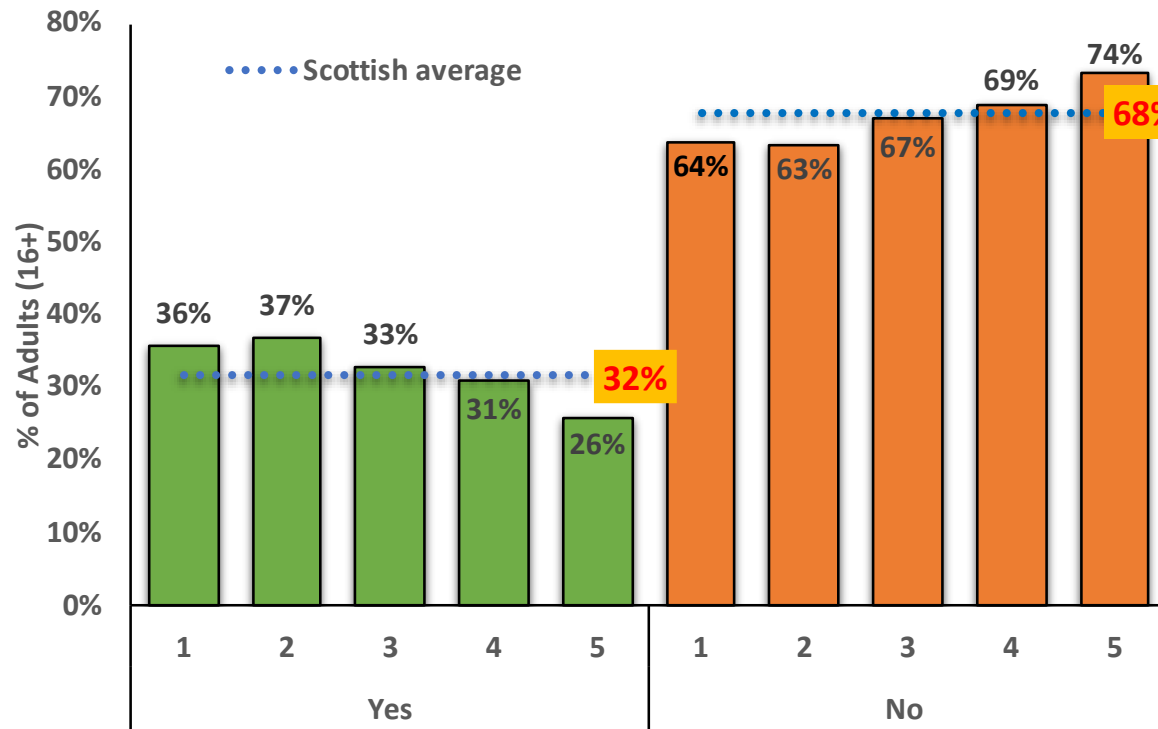


Participation rates for those adults that have never smoked are 3% higher than the Scottish average.

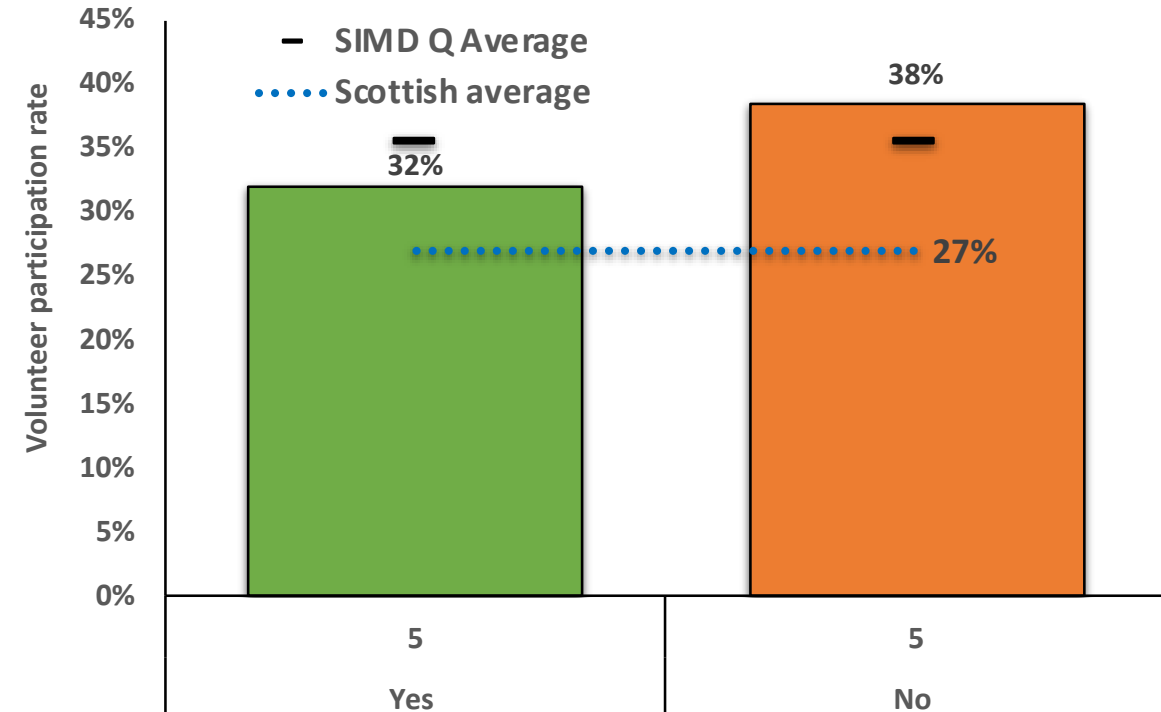
\*18.5% of survey respondents did not answer this question, the participation rate for individuals who did not answer this question is 17.9%. This group is included in the Scottish average calculation.

# Health Behaviours

Has ever smoked cigarettes - SIMD Q



Volunteer participation and has ever smoked cigarettes- SIMD Q



SIMD Q1, Q2 and Q3 have higher than average percentages of adults who have smoked at some point in their lives.

The relationship between 'has ever smoked cigarettes' and volunteer participation is only statistically significant for SIMD Q5, where participation rates are below the quintile average for adults who have previously smoked and above average for adults who have never smoked.

## 7. Summary Highlights

# Summary highlights – Scottish Level

Volunteer participation rates are higher than the Scottish average (27%) for adults who:

- Have a positive view of their general health, ranking their general health as Good / Very Good (6% higher).
- Have a high SWEMWBS score indicating a more positive mental health score (4% higher).
- Do not have a long term (lasting > 12 months) physical or mental health condition (2% higher )
- Are not limited by any long-term health conditions they have (7% higher).
- Do not have any household members with a long-term health condition (2% higher).
- Are currently non-smokers (2% higher).
- Have never smoked (3% higher).

Overall this tells us that more Scottish adults volunteer when they have positive general or mental health and practise positive healthy behaviours. From this data we cannot confirm if volunteering causes positive health changes in the volunteers, but we do see a strong relationship between health and volunteering.

# Summary highlights – SIMDQ Level

The relationship between health and volunteering at an SIMD Q level follows the overall Scottish trends with higher volunteer participation rates for adults in each SIMD Q with positive general or mental health and who practise positive healthy behaviours.

When considering SIMD Q1 and Q2 (the 40% most deprived areas in Scotland), these quintiles have:

- A higher percentage of adults with a poor self-assessment of their general health than the Scottish average.
- A higher percentage of adults with a low SWEMWBS score.
- A higher percentage of adults with a long-term health condition.
- Are limited “a lot” by any long-term health conditions they have.
- A higher percentage of households with one or more household members with a long-term health condition.
- A higher % of current smokers.
- A higher percentage of adults that have smoked at some point in their lives.

For each of the statistically significant health fields analysed SIMD Q1 and Q2 have participation rates below the quintile Scottish average.

However for adults with a positive self-assessment of their general health, high mental health scores, no long-term health conditions, no adults in the household suffering from long-term health conditions and those practising positive health behaviours, the participation rates are all higher than their SIMD Q average.