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Self-efficacy, Locus of Control & Life Satisfaction in Northern Ireland, 2014/15 and 2015/16.

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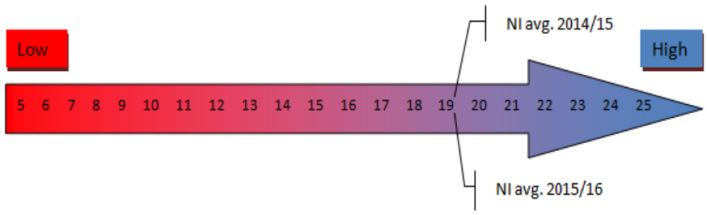
Northern Ireland Statistics & Research Agency

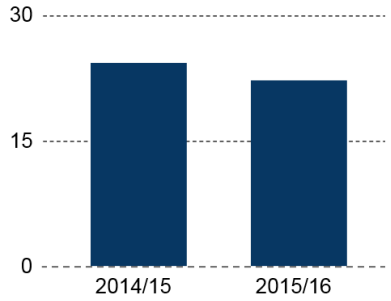
Self-efficacy, Locus of Control and Life Satisfaction in Northern Ireland, 2014/15 and 2015/16.

Self-efficacy:

Self-efficacy is a person's belief about their capabilities to exercise influence over events that affect their lives.



Mean self-efficacy scores for the Northern Ireland population were relatively high (19.2 out of 25) for both years.

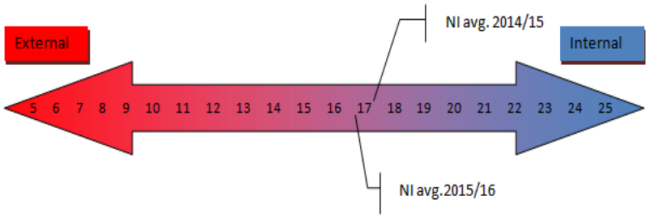


Roughly one quarter of people (24.3%) in 2014/15 had a low self-efficacy, in 2015/16 this fell to 22.2%. This was not a statistically significant change.

Statistically significant differences in self-efficacy scores were found across different sections of society; most prominently in relation to deprivation, employment and health. Individuals who were living in the most deprived areas, those who were economically inactive and individuals with bad/very bad health exhibited the lowest self-efficacy.

Locus of Control (LOC):

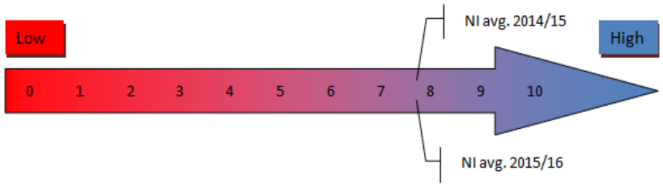
Locus of control explains the degree to which a person feels in control over their life. Individuals with an internal LOC believe in their own influence and control while those with an external LOC believe control over their life is determined by outside factors.



Mean locus of control scores were generally anchored towards the internal end of the scale with a score of 17.1 in 2014/15 and 16.9 in 2015/16 - this decrease between years was statistically significant.

Statistically significant differences in LOC scores were found across different sections of society; most prominently in relation to age, deprivation, employment and health. Individuals who were living in the most deprived areas, those aged 65+, the economically inactive and individuals with bad/very bad health exhibited a more external locus of control.

Life Satisfaction



Life satisfaction scores were similar across both 2014/15 and 2015/16 at 7.8 out of 10. The Northern Ireland population have a relatively high life satisfaction; this reflects similar findings from the ONS.

Statistically significant differences in life satisfaction were found across different sections of society; most prominently in relation to age, deprivation, employment, health and marital status. The middle age groups, individuals living in the most deprived areas, the economically inactive, people with bad/very bad health and those married but separated had the lowest life satisfaction.

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Contents

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Introduction:

This bulletin provides figures for Northern Ireland on three metrics:

- Self-efficacy
- Locus of Control
- Life Satisfaction

Self-efficacy (GSE) – Bandura[1] conceptually described self-efficacy as a person's belief about their capabilities to exercise influence over events that affect their lives. People with high self efficacy are often seen as confident in their capabilities and produce sustained efforts to achieve their goals, in contrast people with low self-efficacy often doubt their capabilities, are less ambitious and give up on their aims when challenged. In short self-efficacy is a question of resilience and those with higher self-efficacy often experience greater life satisfaction and wellbeing.

Locus of Control (LOC) – LOC is a personality construct which explains the degree to which a person feels they have control over their life. The locus of control scale can be seen as a continuum from external to internal. Those with internal LOC believe in their own influence over life events and are confident that their actions can have direct effect on their life outcomes. Those with external LOC believe the converse and appoint personal outcomes as the result of fate and factors outside of their control[2].

Life Satisfaction – Life satisfaction relates to an individual's satisfaction with their life overall. Higher scores on the life satisfaction scale indicate a greater sense of contentment with life and have many implications for life facets such as health, family, lowering depression and weight loss[3].

These concepts are being used to explore what our population looks like in terms of levels of self-efficacy, locus of control and life satisfaction. The data have been gathered for the NI population and have also been gathered at a project level (under several major Government Programmes including The Executive Office Social Investment Fund and the Executive's Delivering Social Change signature programmes). The purpose of gathering these 'common metrics' across government programmes is to assess whether involvement with projects has any influence on participants' belief in their own ability to overcome challenges and reach goals (self-efficacy), whether an individual's sense of control over their lives can be shifted more towards the internal (locus of control), and whether a participant's life satisfaction can be improved.

[1] Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998).
[2] Rotter, J. B. (1954). *Social learning and clinical psychology*: Englewood Cliffs, NJ: Prentice Hall.
[3] Quality Improvement Fund (2015). *Investigating Locus of Control, Self-efficacy and Wellbeing – The relationships between all items across 3 instruments for a single item scale*: https://gss.civilservice.gov.uk/wp-content/uploads/2013/02/Janis-Scallon-report.pdf.

Common metrics data are collected at the population level, via the Continuous Household Survey, with data available for 2014/15 and 2015/16. This bulletin examines the figures and also explores whether any differences exist in these metrics across various sections of society in Northern Ireland.

Self-efficacy has been included as an indicator in the Executive's draft Programme for Government. The Executive is seeking to increase the confidence and capability of people and communities, and a self-efficacy population indicator for Northern Ireland will be used to monitor and assess progress at a population level under two outcomes:

- We are an innovative, creative society, where people can fulfil their potential
- We are a confident, welcoming, outward-looking society

Chapter 1 - Self Efficacy:

Developing from 'Social Learning Theory', self-efficacy is a psychological concept which is mediated by a person's environment and their capabilities to cope within this environment. Self-efficacy plays a role in determining what decisions a person makes and sees as realistically attainable. Any challenges to these goals are either seen as threats to be avoided or opportunities to engage and improve depending on where they are positioned on the self-efficacy scale. As mentioned, self-efficacy is a question of resilience with those exhibiting higher levels of self-efficacy being more confident in their abilities and ready to face challenges, whereas those with lower self-efficacy often shy away from reproach.

Evidence has shown that self-efficacy can influence both physical and mental health[4], learning and achievement, career and job satisfaction[5] and family relations[6].

Developing the ability to measure and monitor levels of self-efficacy can have positive implications for large scale social change. Utilising interventions for specific groups, designed to increase and foster their self-efficacy can develop collective resilience and capacity which has the potential to be self-perpetuating and sustaining. This can lead to positive social change among communities, improve social cohesion and inter-group relations[7].

The tool for measuring self-efficacy is a simple statement based survey tool. It takes the form of 5 simple statements to which the individual indicates to what extent they agree or disagree on a five point Likert scale[8]. Self-efficacy is presented as an overall score which is marked out of a maximum 25 and minimum 5; a higher score on the scale represents a greater general self-efficacy. The questions used in this scale are at Appendix A.

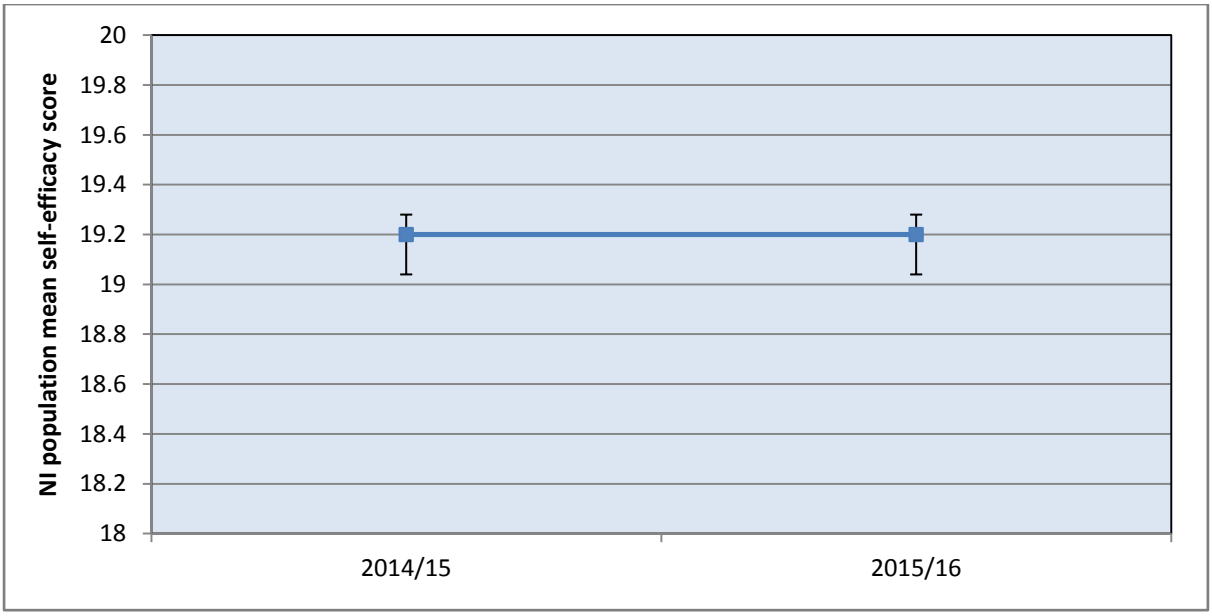
For the purposes of this report self-efficacy scores have been classified as either low or high depending on an individual's overall score on the 25 point scale. A score from 5-17 indicates low self-efficacy and a score from 18-25 represents high self-efficacy[9].

[4] Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman and Company.
[5] Bandura, A., Barbaranelli, C., Capara, G.V., & Pastorelli, C. (2001). *Self-efficacy beliefs as shapers of children's aspirations and career trajectories.* Child Development, 72, 187-206.
[6] Bandura, A., Barbaranelli, C., Capara, G.V., Regalia, C. & Scabini, E. (2011). *Impact of family efficacy beliefs on quality of family functioning and satisfaction with family life.* Applied Psychology. 60(3), 421-448.
[7] McNamara, N. Stevenson, C. & Muldoon, O.T. (2013). *Community identity as resource and context: A mixed method investigation of coping and collective action in a disadvantaged community.* European Journal of Social Psychology.
[8] See Appendix A for details on the five statements which are used to measure self-efficacy.
[9] See Appendix A for further details on low/high self-efficacy.

1.1 Mean self-efficacy scores for Northern Ireland, 2014/15 and 2015/16. *(See tables A1.1 – A1.12 -* https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications)

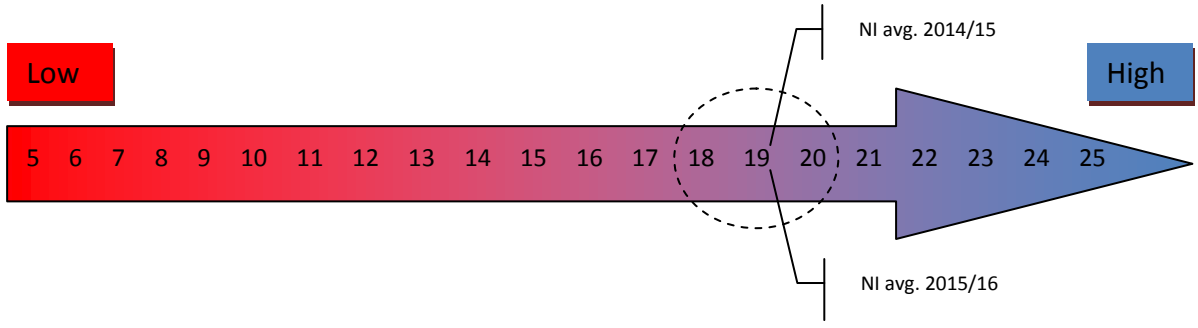
Mean self-efficacy scores for the Northern Ireland population were relatively high, a score of 19.2 out of a possible 25 on the self efficacy scale was reported in both 2014/15 and 2015/16.

Figure 1.1: Mean self-efficacy scores for the NI population (2014/15 & 2015/16).



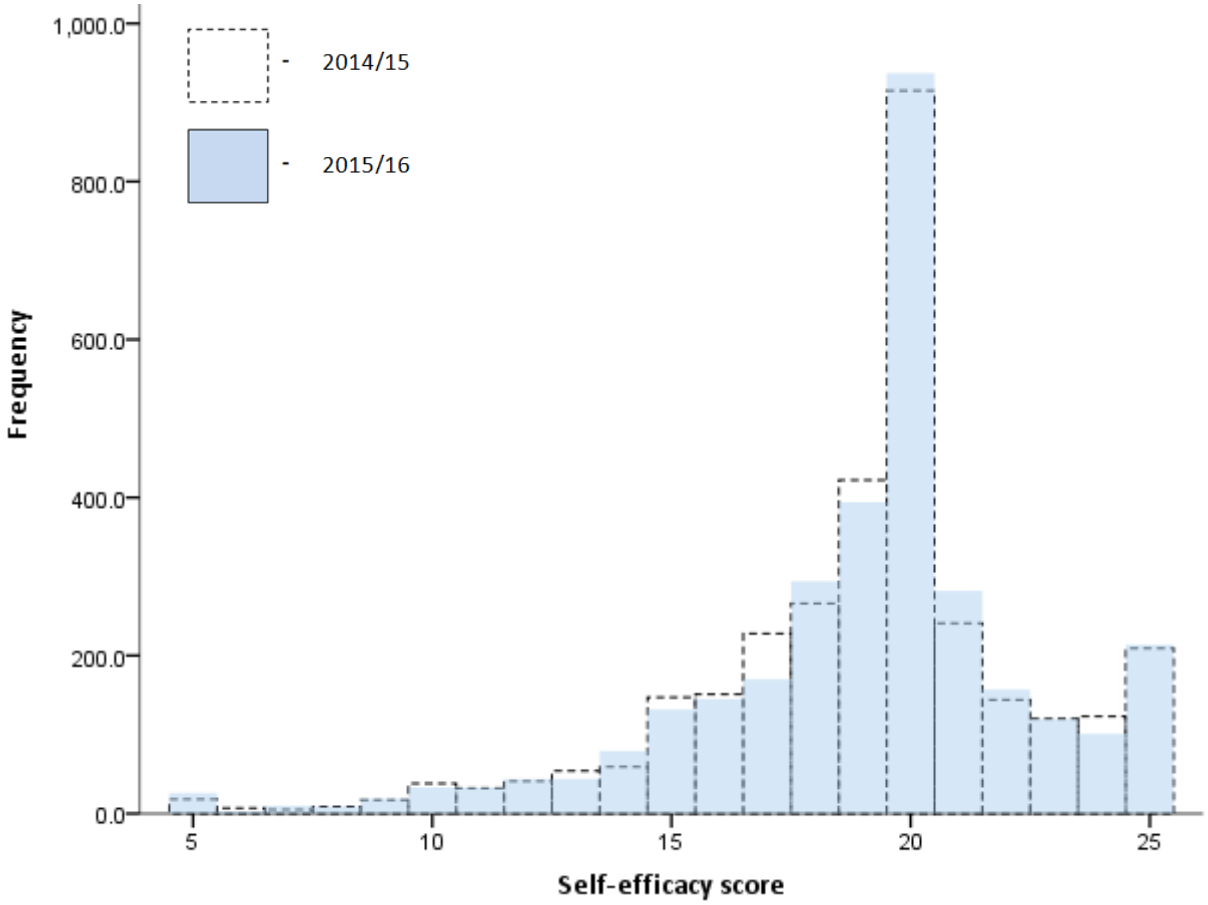
Note: Figure 1.1 depicts a cross section of the self-efficacy scale and includes the (unrounded) 95% confidence intervals for each estimate. These confidence intervals represent the ranges either side of the CHS proportions which are 95% certain to include the true values for the population. For example, we can be 95% certain that the true NI population mean for both 2014/15 and 2015/16 falls between 19.04 and 19.28 on the self-efficacy scale (see Appendix A for more information).

Figure 1.2: Self-efficacy scale



1.2 Distribution of self-efficacy scores for Northern Ireland, 2014/15 and 2015/16.

Figure 1.3: Distribution of NI self-efficacy scores (2014/15 & 2015/16)



The distribution of self-efficacy scores for the NI population from 2014/15 to 2015/16 has remained similar with no discernible shift evident.

1.3 Mean self-efficacy: Differences between various sections of society in NI, 2014/15 and 2015/16. (*See tables A1.1 – A1.12* – https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications)

Males scored significantly higher than females on the self-efficacy scale in both 2014/15 and 2015/16.

In both 2014/15 and 2015/16, 25-34 year olds scored highest on the self-efficacy scale. Their mean score was significantly higher than the score for the oldest age groups (55-64 and 65+) in both years.

Individuals living in the least deprived areas (Q5) reported a significantly higher mean self-efficacy score in 2015/16 than those in the most deprived areas (Q1).

Individuals who were employed recorded significantly higher mean self-efficacy scores than those who were economically inactive in both 2014/15 and 2015/16.

Individuals classified as 'Other/non-determined' scored significantly higher on the self-efficacy scale than Protestants in 2015/16. There were no significant differences in mean self-efficacy scores between Catholics and Protestants in either 2014/15 or 2015/16.

In 2015/16 people who lived within a rural location exhibited significantly higher levels of self-efficacy than their urban counterparts.

Individuals with bad/very bad health scored lowest on the self-efficacy scale in both years. Their mean scores were significantly lower than individuals with either very good/good or fair health in 2014/15 and 2015/16.

In both years individuals living with a limiting long-standing illness recorded significantly lower levels of self-efficacy than people living without.

In both years individuals who confirmed having responsibility for a dependant recorded significantly higher levels of self-efficacy than those without.

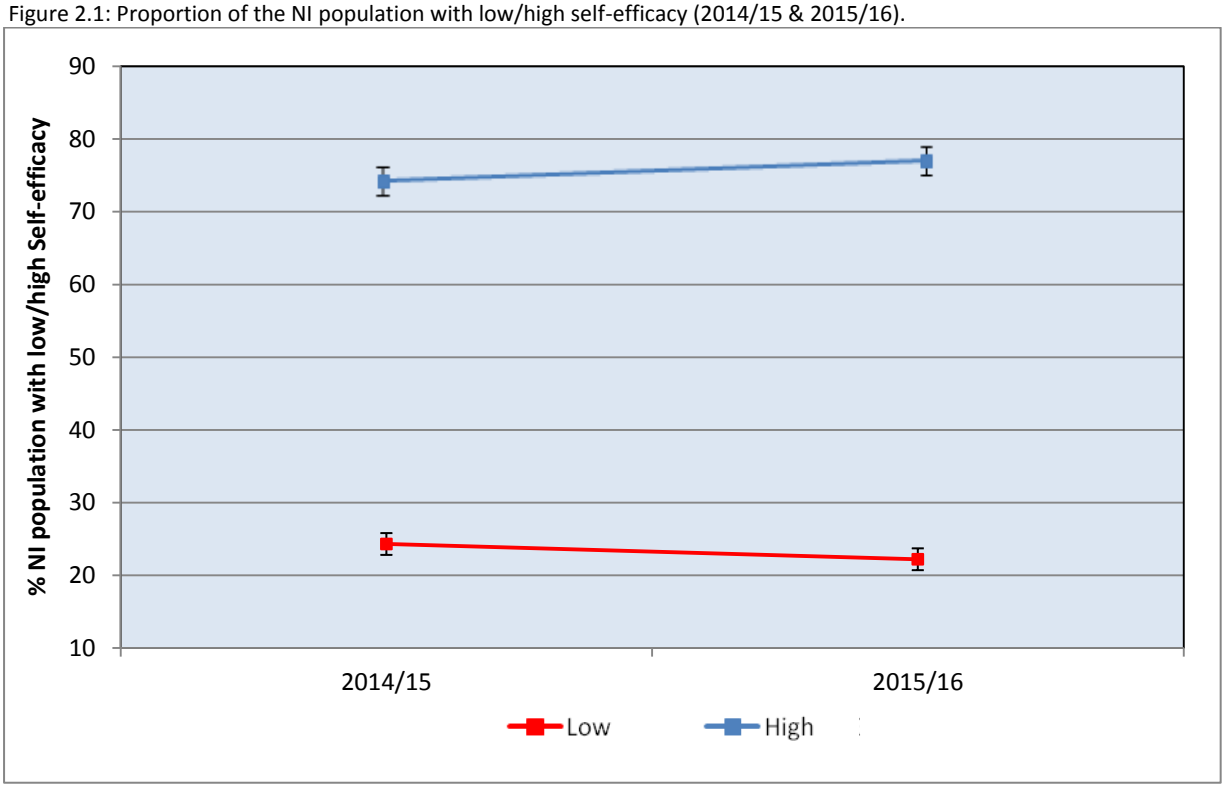
In 2014/15 and 2015/16, individuals who confirmed as being married and living with their spouse reported significantly higher self-efficacy than all other marital groups, with the exception of single people in 2014/15 only.

Chapter 2: Low/High self-efficacy in relation to Northern Ireland.

While the previous section examined the distribution of self-efficacy scores and focused on the average levels of self-efficacy in our population, this section explores the proportions in our population who have either high or low self-efficacy. For the purposes of this analysis self-efficacy scores have been classified as either low or high depending on an individual's score on the 25 point scale. A score from 5-17 indicates **low** self-efficacy and a score from 18-25 represents **high** self-efficacy. In 2014/15 approximately three-quarters (75.7%) of people in Northern Ireland were classified as having a high self-efficacy. This increased to 77.8% of people in 2015/16; however this was not a statistically significant change.

Conversely, in 2014/15, approximately one-quarter (24.3%) of people were classified as having low self-efficacy and this decreased to 22.2% in 2015/16; however, this was not a statistically significant change.

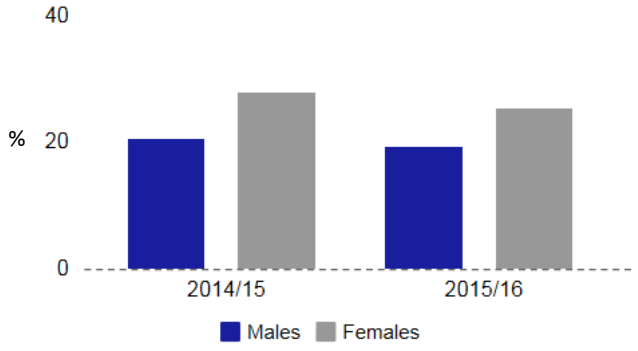
Figure 2.1: Proportion of the NI population with low/high self-efficacy (2014/15 & 2015/16).



Note: Figure 2.1 depicts the percentage of the population with low/high self-efficacy and includes the (unrounded) 95% confidence intervals for each estimate. These confidence intervals represent the ranges either side of the CHS proportions which are 95% certain to include the true values for the population. For example, we can be 95% certain that the true proportion of the NI population for 2014/15 with low self-efficacy falls between 22.8% and 25.8% (see Appendix A for more information).

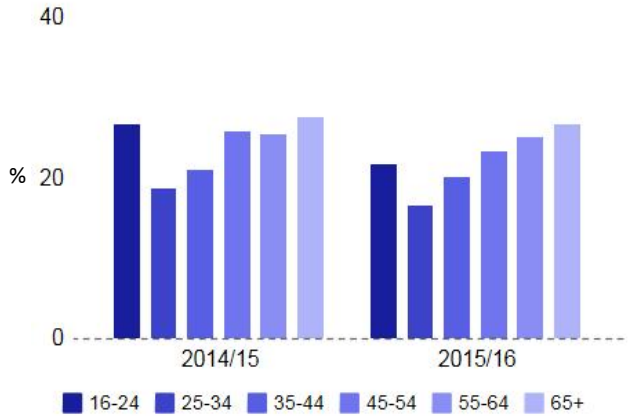
2.1	Proportion reporting a low self-efficacy: Differences between various sections of society in NI, 2014/15 and 2015/16. (*See tables A2.1 – A2.12* - https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications)

Gender



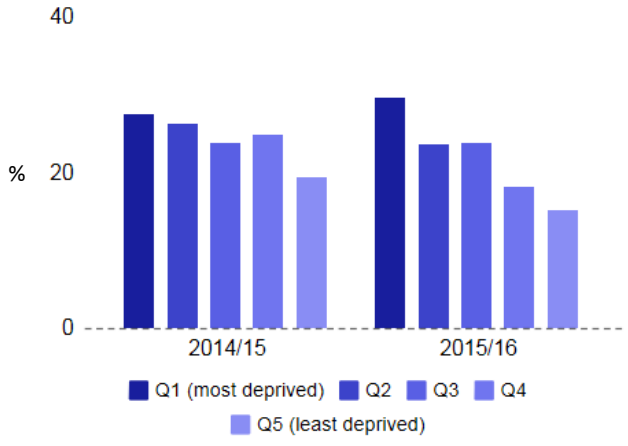
In 2014/15 and 2015/16, females were classified as having low self-efficacy in 27.8% and 25.2% of cases respectively. This was significantly higher than males who were classified as low in 20.4% (2014/15) and 19.2% (2015/16) of cases.

Age



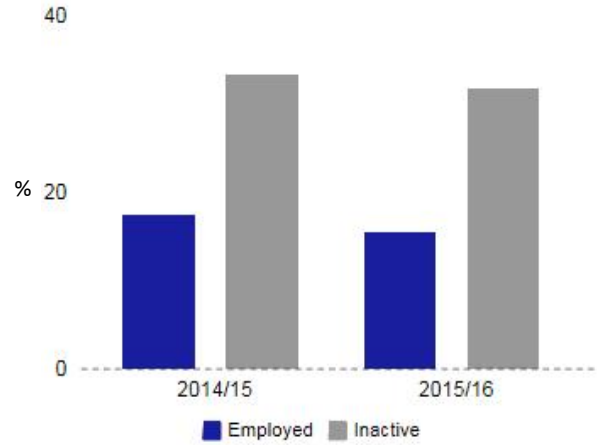
In both 2014/15 and 2015/16, those aged 25-34 were classified as having a low self-efficacy in 18.6% and 16.6% of cases respectively. Significant differences were found between 25-34 year olds and the 45-54, 55-64 and 65+ age groups, who had a low self-efficacy in roughly a quarter of cases.

Deprivation



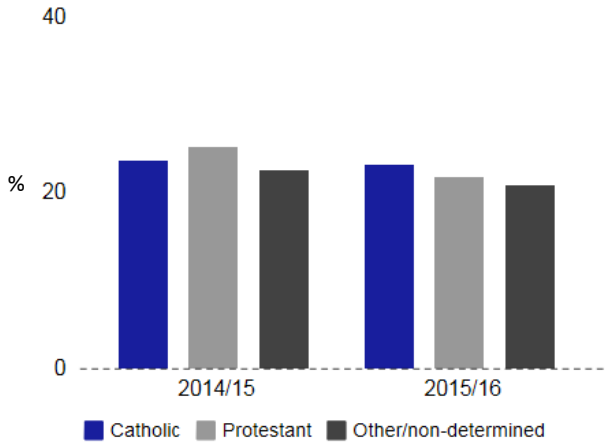
Comparing the most deprived areas (Q1) to the least deprived (Q5), a significantly higher proportion of people from Q1 exhibited a low self-efficacy. In 2014/15 this was 27.4% (Q1) and 19.3% (Q5). The difference even greater in 2015/16 at 29.6% (Q1) and 15.1% (Q5).

Employment



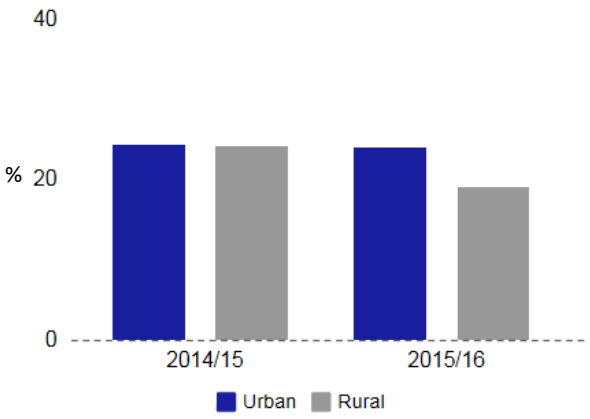
In both years approximately one-third of all individuals who were economically inactive exhibited low self-efficacy. When compared to individuals who were employed there were significantly fewer cases of low self-efficacy at 17.5% (2014/15) and 15.5% (2015/16).

Religion



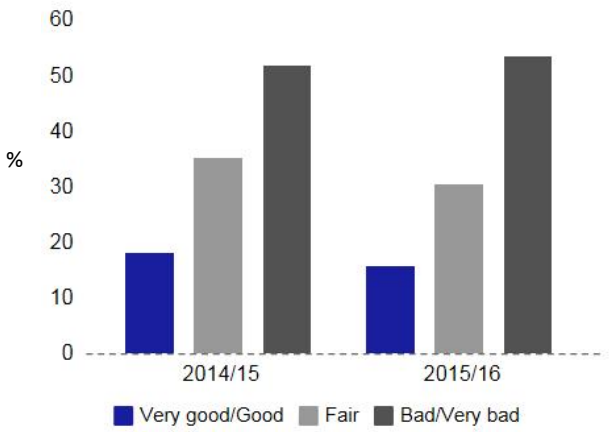
The proportion of those classified as having a low self-efficacy was similar between Catholics, Protestants and Other/non-determined with no significant differences between the groups.

Urban/Rural



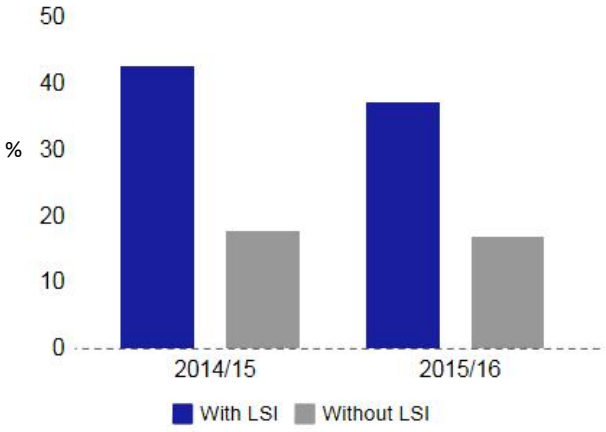
In 2014/15 the proportion of individuals from both urban and rural areas classified as having a low self-efficacy were similar. However in 2015/16 a significantly higher percentage of people from urban areas had a low self-efficacy.

Health



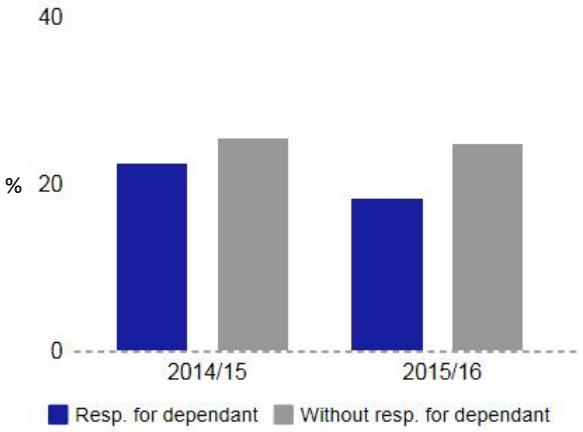
Individuals who reported as having bad/very bad health exhibited a low self-efficacy in over 50% of cases in both years. This was significantly higher than individuals with very good/good or fair health.

Long standing illness

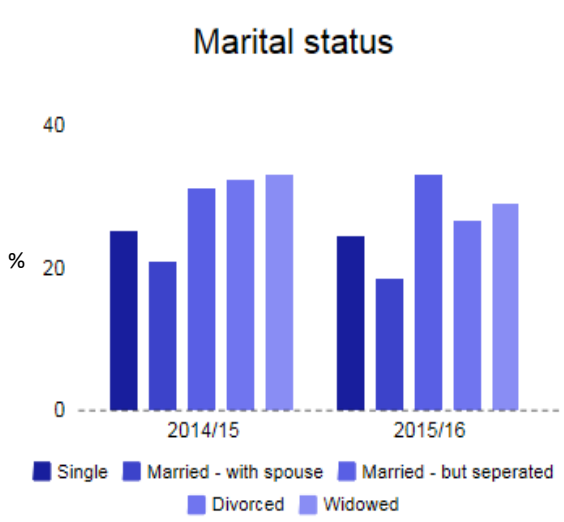


Respondents indicating they are living with a limiting long standing illness exhibited a low self-efficacy in 42.6% (2014/5) and 37.1% (2015/16) of cases. This was significantly higher than those without a limiting long standing illness, who had a low self-efficacy in 17.7% (2014/15) and 16.7% (2015/16) of cases.

Dependants



In 2015/16 a quarter of individuals who indicated they are not responsible for a dependant exhibited low self-efficacy. This was significantly higher than those who do care for a dependant (18.3%). No significant differences were found in 2014/15 between the two groups.



People who were married and living with their spouse were classified as having a low self-efficacy in 20.9% (2014/15) and 18.4% (2015/16) of cases. This was a significantly lower percentage than all other marital groups in 2015/16.

Chapter 3 – Locus of Control:

Rotter[10] outlines locus of control as a personality construct which explains the degree to which a person feels they have control over events that shape their lives. Locus of control is dichotomised as either external or internal. Those with internal locus of control harbour the general belief that they have influence over the events which shape their lives; they are more likely to see success as a reflection of their efforts. In contrast people with a more external locus of control often attribute outcomes to the result of fate / external influences and therefore outside of their control.

Individuals with more internal locus of control tend to take responsibility for their lives, tackle problems confidently and persevere and improve on their tasks. On the other hand, individuals with an external locus of control tend to attribute influences in their lives to factors outside of their control, such as other people or fate/destiny for lack of success or challenges to their progression[11].

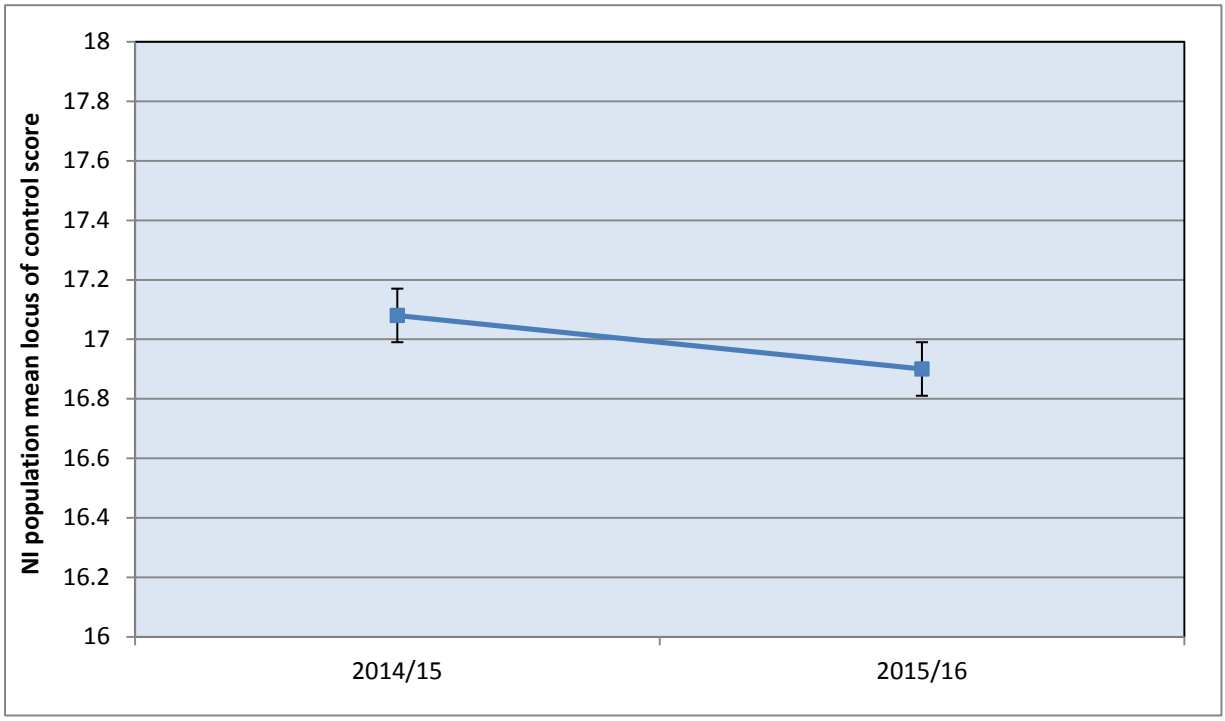
The tool for measuring locus of control is a simple statement based survey tool. It takes the form of 5 simple statements to which the individual indicates to what extent they agree or disagree on a five point Likert scale[12]. Locus of control is presented as an overall score which has a maximum of 25 and minimum of 5. It is important to distinguish the differences between the self-efficacy scale and the locus of control scale; although both are measured on a scale of 5-25, the locus of control scale is not a measurement of higher and lower, rather it is seen as a continuum from external to internal.

[10] Rotter, J. B. (1954). *Social learning and clinical psychology*: Englewood Cliffs, NJ: Prentice Hall.
[11] Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. American psychologist, 45(4), 489.
[12] See technical annex for details on the five statements which are used to measure locus of control.

3.1 Mean locus of control scores for Northern Ireland, 2014/15 and 2015/16. (*See tables A3.1 – A3.12* - https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications)

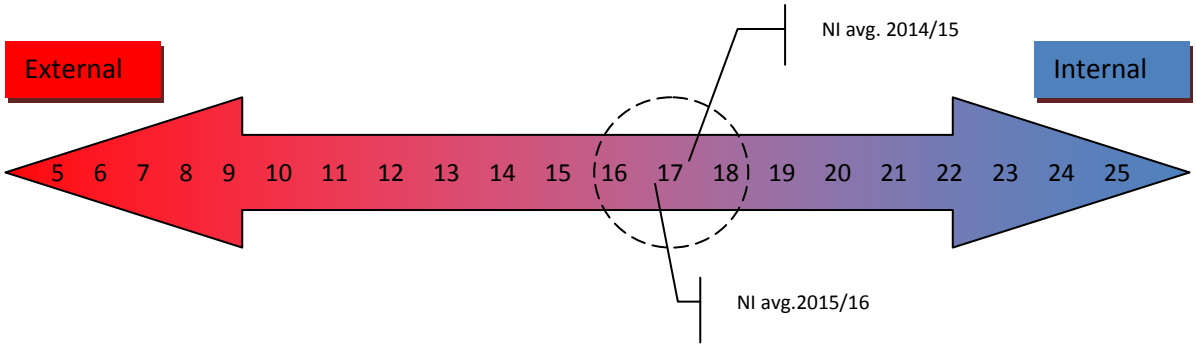
Mean locus of control scores in Northern Ireland are generally anchored towards the 'internal' end of the scale. The mean score in general population was 17.1 in 2014/15 and 16.9 in 2015/16. This decrease in the mean locus of control score between the two years was found to be statistically significant, providing evidence of a shift in our population to a more external locus of control.

Figure 3.1: Mean locus of control scores for the NI population (2014/15 & 2015/16).



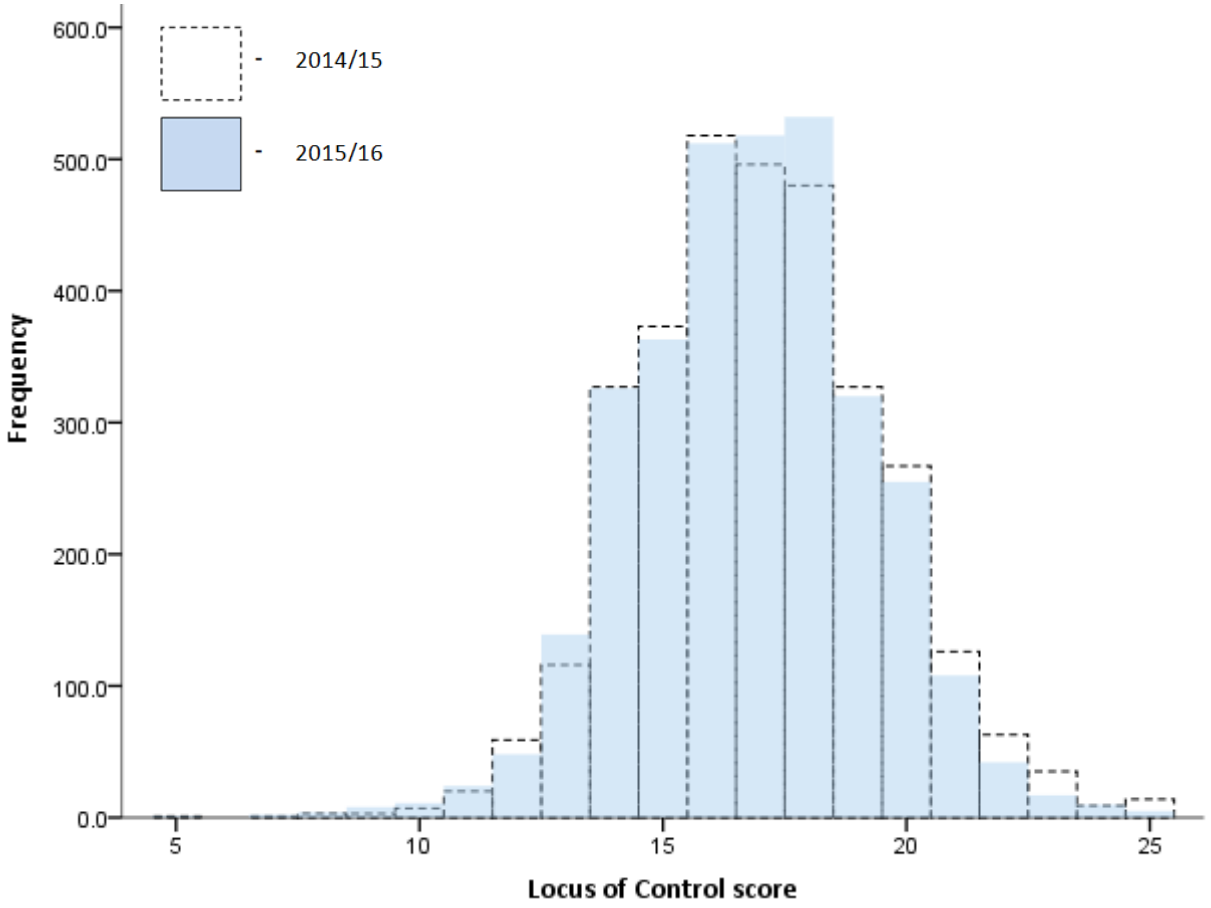
Note: Figure 3.1 depicts a cross section of the locus of control scale and includes the (unrounded) 95% confidence intervals for each estimate. These confidence intervals represent the ranges either side of the CHS proportions which are 95% certain to include the true values for the population. For example we can be 95% certain that the true mean locus of control score of the NI population in 2014/15 falls between 16.99 and 17.16 (see Appendix A for more information).

Figure 3.2: Locus of control scale



3.2 Distribution of locus of control scores for Northern Ireland, 2014/15 and 2015/16.

Figure 3.3: Distribution of NI locus of control scores (2014/15 & 2015/16)



The distribution of locus of control scores for the NI population from 2014/15 to 2015/16 has remained similar with no discernible shift evident.

3.3	Mean locus of control: Differences between various sections of society in NI, 2014/15 and 2015/16. *(See tables A3.1 – A3.12* https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications*)*

Males scored significantly higher than females on the locus of control scale in both years, exhibiting a more internal locus of control.

16-24 year olds recorded the highest locus of control scores and those aged 65+ the lowest, in both 2014/15 and 2015/16. The oldest age group, 65+, exhibited a significantly lower (more external) locus of control than all other age groups (excluding 55-64) in both years.

Individuals living in the most deprived areas (Q1) exhibited a significantly lower (more external) locus of control than those living in the least deprived areas (Q5) in both 2014/15 and 2015/16.

In both 2014/15 and 2015/16, mean locus of control scores for the economically inactive were significantly lower (more external) than the scores for individuals who were in employment.

Locus of control scores were similar for Catholics and Protestants and the highest scores were exhibited by those classified as 'Other/non-determined'. Individuals classified as 'Other/non-determined' scored significantly higher than Catholics and Protestants in both years.

In both 2014/15 and 2015/16, mean locus of control scores for individuals living within urban and rural locations were similar with no significant differences between the two groups.

Individuals who reported having bad/very bad health had a significantly lower locus of control (more external) than individuals who had either very good/good or fair health in both years.

Individuals living without a limiting long-standing illness recorded a significantly higher locus of control score (more internal) than those living with a long-standing illness in both years.

There were no significant differences in locus of control scores for those who had responsibility for a dependant and those who did not and this finding was true for both years.

In both 2014/15 and 2015/16 the highest locus of control scores were recorded by individuals who were single and their scores were significantly higher than the lowest scoring group, the widowed, in both years.

Chapter 4 – Life satisfaction:

Life satisfaction relates to an individual's satisfaction with their life overall. Continuous Household Survey (CHS) respondents were asked: *"Overall, how satisfied are you with life nowadays?"* and asked to give their response on a scale of 0 to 10, where 0 equalled 'not at all satisfied' and 10 equalling 'completely satisfied', i.e. higher scores on the life satisfaction scale represent a greater sense of overall life satisfaction.

Life satisfaction (here used as a proxy for wellbeing), is one of four measures currently being used by the Office for National Statistics (ONS) to explore and measure national wellbeing[13].

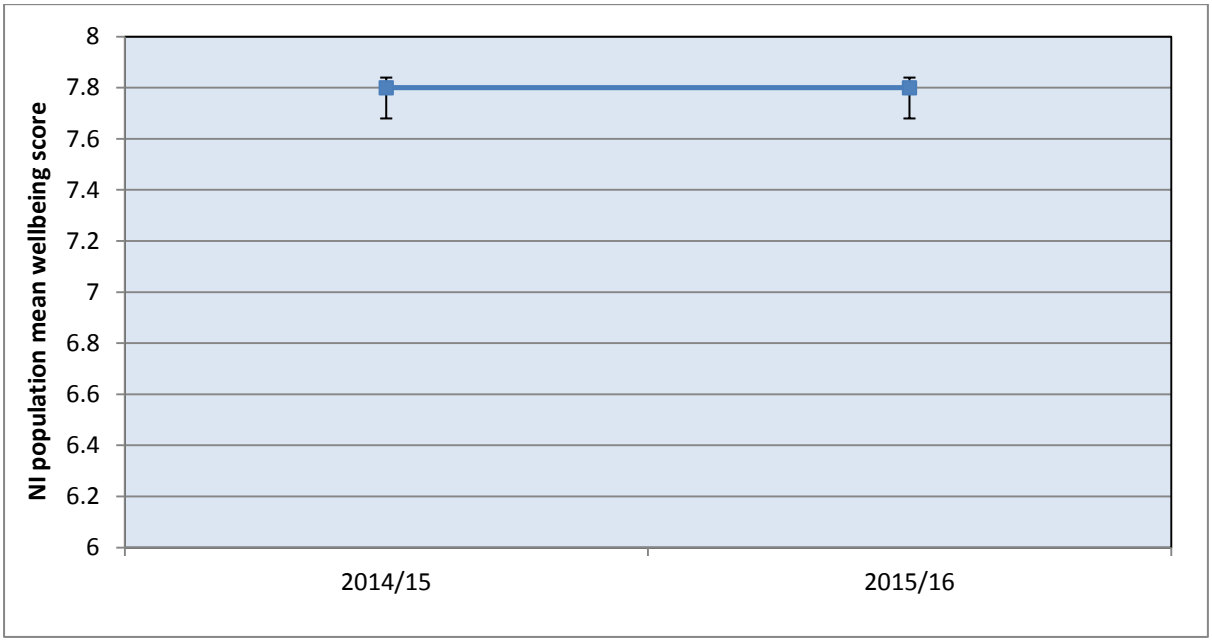
In general terms we have used this life satisfaction score as a proxy for an individual's overall wellbeing.

[13] https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/localauthorityupdate2015to2016.

4.1	Mean life satisfaction scores for Northern Ireland, 2014/15 and 2015/16. *(See tables A4.1 – A4.12 -* https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications*)*

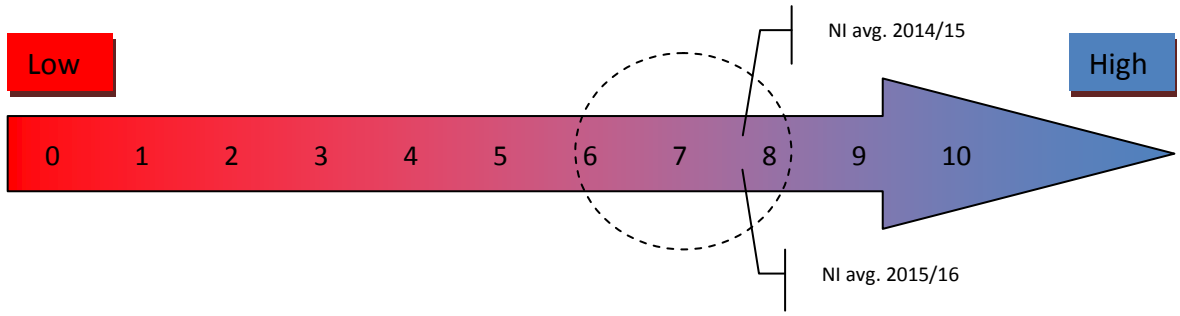
Mean life satisfaction scores for Northern Ireland have remained the same across both years at 7.8 out of 10. The Northern Ireland population is generally anchored towards the upper end of the life satisfaction scale with a high average. This is consistent with findings from ONS' Annual Population Survey[14].

Figure 4.1: Mean life satisfaction scores for the NI population (2014/15 & 2015/16).



Note: Figure 4.1 depicts a cross section of the life satisfaction scale and includes the (unrounded) 95% confidence intervals for each estimate. These confidence intervals represent the ranges either side of the CHS proportions which are 95% certain to include the true values for the population. For example, we can be 95% certain that the true mean life satisfaction score of the NI population in 2014/15 and 2015/16 falls between 7.68 and 7.82 (see Appendix A for more information).

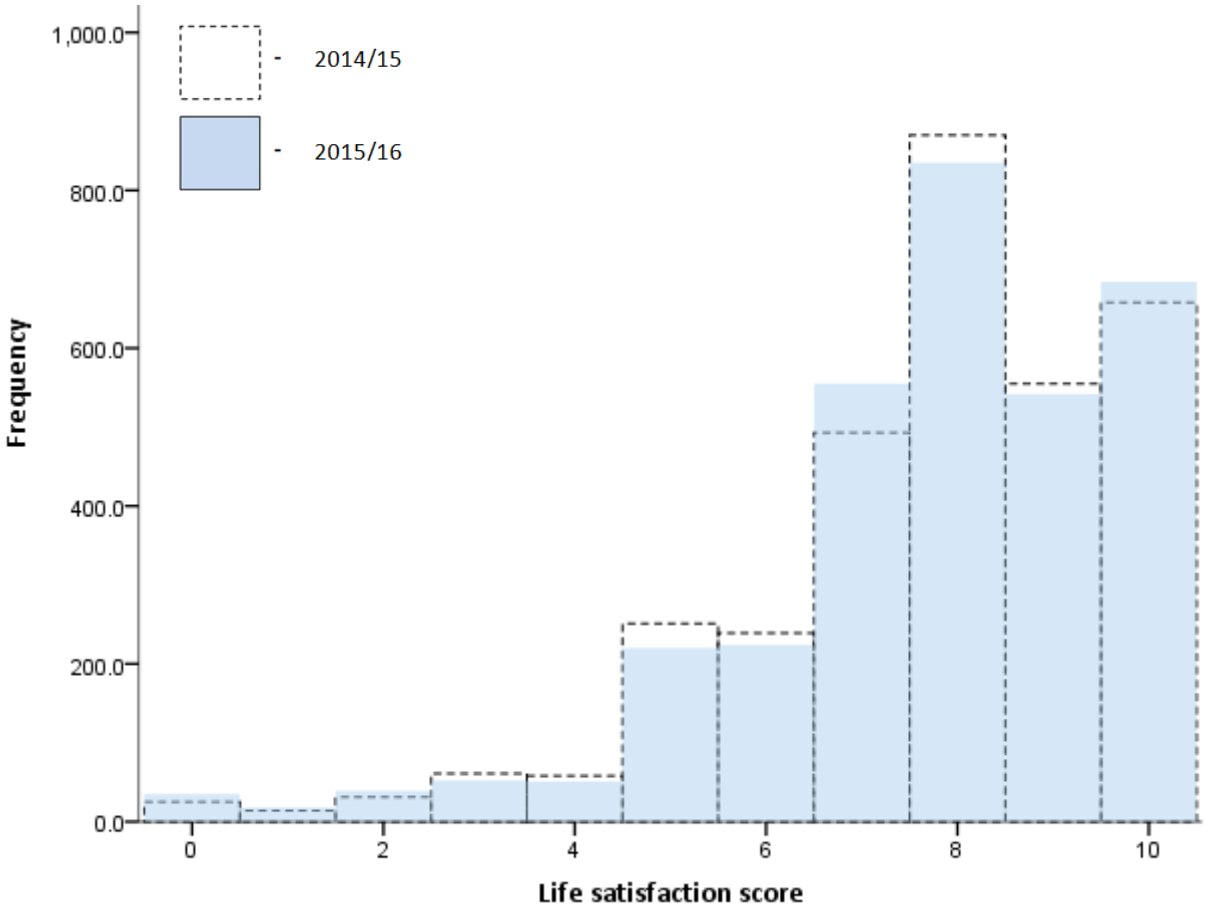
Figure 4.2: Life Satisfaction scale



[14] See: ONS, Personal well-being in the UK: local authority update, 2015 to 2016, http://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/localauthorityupdate2015to2016#main-points.

4.2 Distribution of life satisfaction scores for Northern Ireland, 2014/15 and 2015/16.

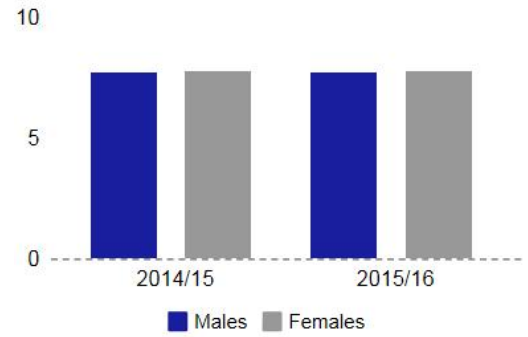
Figure 4.3: Distribution of NI life satisfaction scores (2014/15 & 2015/16)



The distribution of life satisfaction scores for the NI population from 2014/15 to 2015/16 has remained similar with no discernible shift evident.

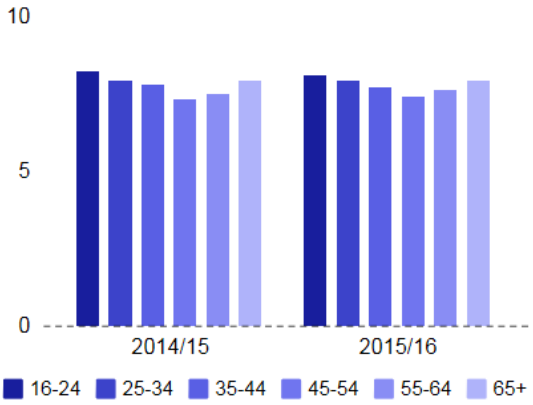
4.3	Mean life satisfaction: Differences between various sections of society in NI, 2014/15 and 2015/16. *(See tables A4.1 – A4.12 - https://www.executiveoffice-ni.gov.uk/articles/equality-research-publications)*

Gender



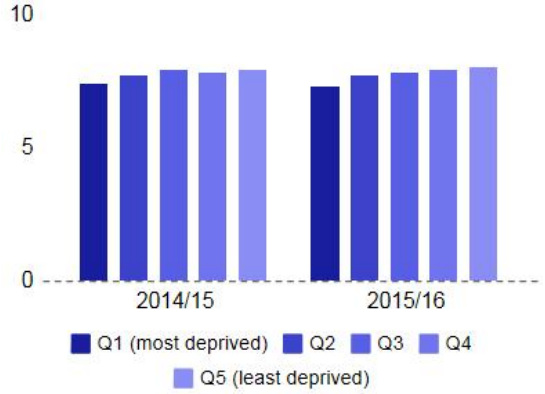
In both 2014/15 and 2015/16, mean life satisfaction scores for both males and females were similar with no significant difference between the two.

Age



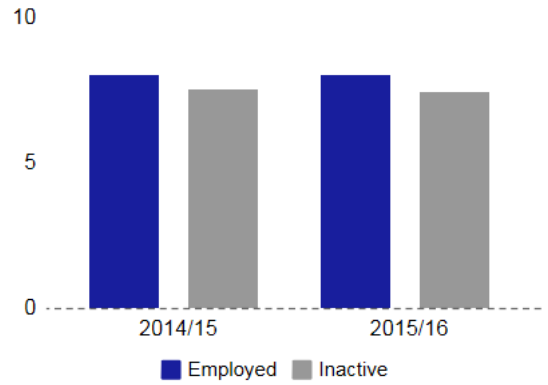
The highest life satisfaction scores in 2014/15 and 2015/16 were recorded by the youngest (16-24 & 25-34) and oldest (65+) age groups. Those aged 45-54 scored significantly lower than these three groups and had the lowest life satisfaction in both years.

Deprivation



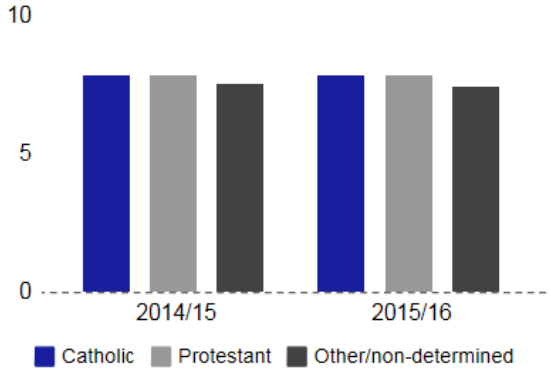
In 2014/15 and 2015/16, individuals living within the least deprived areas (Q5) reported significantly higher life satisfaction scores when compared to those living in the most deprived areas (Q1).

Employment



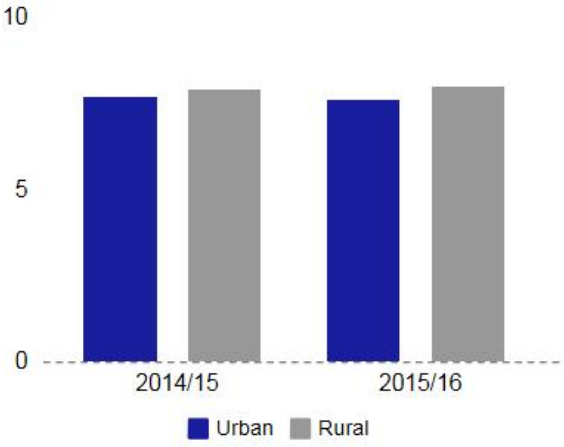
Individuals who were employed had significantly higher levels of life satisfaction than those who were economically inactive in both 2014/15 and 2015/16.

Religion



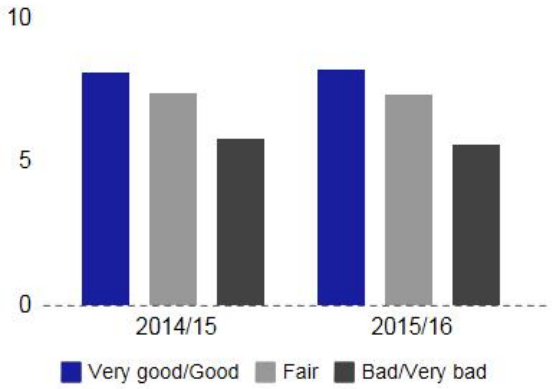
Individuals classified as 'Other/non-determined' had significantly lower levels of life satisfaction than both Catholics and Protestants in 2015/16.

Urban/Rural



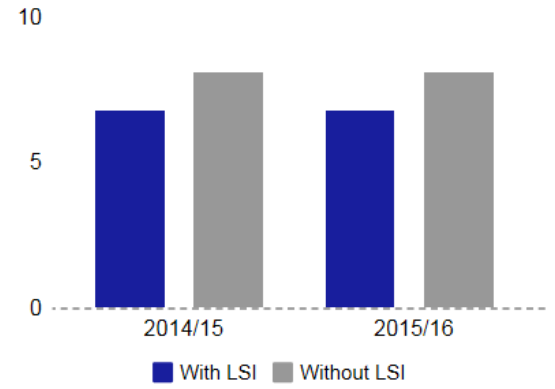
People living in rural areas had significantly higher levels of life satisfaction than those in urban areas in both 2014/15 and 2015/16.

Health



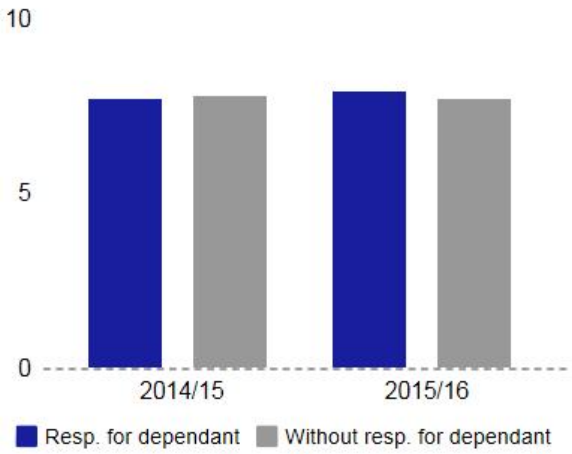
Those who reported having bad/very bad health had significantly lower life satisfaction than people with either very good/good or fair health in both 2014/15 and 2015/16.

Long standing illness



Individuals without a limiting long-standing illness experienced significantly higher levels of life satisfaction than those living with a limiting long-standing illness in both years.

Dependants



In 2015/16 those who confirmed having responsibility for a dependant reported significantly higher levels of life satisfaction than those without.

Individuals who were married and living with their spouse recorded significantly higher levels of life satisfaction than all other groups in both years. The lowest life satisfaction scores in 2014/15 and 2015/16 were reported by individuals who were married but separated.

Appendix A – Technical Notes

Continuous Household Survey

This report presents findings from the 2014/15 and 2015/16 Continuous Household Survey (CHS) on the perceived general self-efficacy, locus of control and life satisfaction for the Northern Ireland population. The CHS is carried out by the Central Survey Unit (CSU) within the Northern Ireland Statistics and Research Agency (NISRA); the CHS has been in existence since 1983 and is designed to provide a regular source of information on a wide range of social and economic issues relevant to Northern Ireland.

Each year CSU sets the content of the questionnaire in consultation with client departments. The questionnaire consists of both a household interview and an individual interview with each person aged 16 and over. Both the household and individual questionnaires consist of core items that are included each year and modules that recur on a regular cycle. Core items include household and individual demographics, accommodation, tenure, migration, internet access, environmental issues, domestic tourism, participation in sports, arts and leisure, employment status, employment activity, educational qualifications, health and Section 75 classifications.

The instruments for measuring self-efficacy and locus of control are each a simple statement based survey tool. They each take the form of 5 simple statements to which the individual indicates to what extent they agree or disagree on a five point Likert scale. Life satisfaction is presented as a single statement question, 'Overall, how satisfied are you with your life nowadays?' to which the individual responds on an 11 point Likert scale (0-10). Self-efficacy and locus of control are each presented as an overall score out of a maximum 25 and minimum 5 taken from the summated total of the five statement questions; life satisfaction is scored out of 0-10, with 10 being the highest achievable score.

Self-efficacy statement questions:

1. I can always manage to solve difficult problems if I try hard enough.
2. I am confident that I could deal efficiently with unexpected events.
3. I can remain calm when facing difficulties because I can rely on my coping abilities.
4. When I am confronted with a problem, I can usually find several solutions.
5. No matter what comes my way, I'm usually able to handle it.

Locus of control statement questions[15]:

1. I am in control of my life.
2. If I take the right steps, I can avoid problems.
3. Most things that affect my life happen by accident.
4. If it's meant to be, I will be successful.
5. I can only do what people in my life want me to do.

[15] Locus of control statement questions 3, 4 and 5 were reversed and recoded prior to analysis.

Life satisfaction statement question:

1. Overall, how satisfied are you with your life nowadays?

Sample

The CHS is based on a systematic random sample of 4,500 addresses drawn each year from the Pointer list of domestic addresses. Pointer is the address database for Northern Ireland and is maintained by Land & Property Services (LPS), with input from Local Councils and Royal Mail (RM). This is now the common standard address for every property in Northern Ireland. The Pointer addresses are sorted by district council and ward, so the sample is effectively stratified geographically. Data are collected by personal interview using CAPI, and the interviews are spread equally over the 12 months from April to March.

Weighting

As the CHS is based on a sample of the general population in private households the results are subject to sampling error i.e. the actual proportion of the population in private households with a particular characteristic may differ from the proportion within the CHS sample. As a result data has been weighted to make considerations for the sampling error, the three weights produced accounted for age, sex and general analysis. The adjustment made to any data may be less than or greater than 1, but will generally be reasonably close to 1. While weighting for non-response should reduce bias it must be acknowledged that it will not completely eliminate bias. **All reported means /proportions have been weighted**.

Sample error

Because the CHS is a sample survey there is a certain level of sampling error in the reported figures. The data tables include the 95% confidence intervals for each estimate. These confidence intervals represent the ranges either side of the CHS proportions which are 95% certain to include the true values for the population. For example we estimate that the self-efficacy population mean score is 19.2, we can be 95% certain that the true NI population mean for both 2014/15 and 2015/16 falls between 19.04 and 19.28. Confidence intervals for the demographics gender, age, deprivation employment status, Religion, SOA urban/rural, health, long-standing illness, dependants and marital status have been calculated using **un-weighted** data.

Response Rate

The target response rate on CHS is 68% or approximately 2,700 participating households. Within each participating household, every member of the household aged 16 and over is invited to carry out an individual interview. Some interviews are carried out by proxy method for those persons who do not wish to take part in the individual interview. In 2014/15, 2521 households participated in the survey and 3343 individuals aged 16 and over completed an individual interview, the overall response rate was 65%. In 2015/16, 2495 households participated in the survey and 3286 individuals aged 16 and over were interviewed, the overall response rate was 64%.

Publication Threshold

It is the nature of sampling variability that the smaller the group whose size is being estimated, the (proportionately) less precise that estimate is. Estimates for groups where the sample is less than 100 have been omitted from the report, as they are likely to be unreliable. These instances have been denoted with an asterisk (*) in the tables.

Statistical Significance

Statistically significant differences between years or groups (at the 95% level) have been highlighted throughout the report. This means that we can be 95% confident that the differences between groups are actual differences and have not just arisen by chance. The base numbers, mean scores and percentages have an effect on statistical significance. Therefore on occasion, a difference between two groups may be statistically significant while the same difference in mean score or percentage points between two other groups may not be statistically significant. The reason for this is because the larger the base numbers or the closer the percentages are to 0 or 100, the smaller the standard errors. This leads to increased precision of the estimates which increases the likelihood that the difference between the proportions is actually significant and did not just arise by chance.

Definitions

Low/high Self-efficacy: Each of the five statements questions on self-efficacy were answered in response on a five point Likert scale (strongly agree = 5, agree = 4, neither agree or disagree = 3, disagree = 2 and strongly disagree = 1). Individual responses were summated into a total scored out of 25 with 5 being the lowest and 25 the highest. High self-efficacy scores were calculated by determining a score of 70% of the total possible (25) and over as being a high self-efficacy (18-25); low self efficacy was therefore anything under 70% (5-17). This is a valid method for determining high and low scores in Likert type survey instruments[16].

ILO Employed: Comprises all individuals aged 16 or over who are in paid employment (both employees and self employed), those on government training or work schemes, those who had a formal attachment to their job but were temporarily not at work during the reference period, performed some work for profit or family gain in cash or kind, were with an enterprise such as a business, farm or service but who were temporarily not at work during the reference period for any reason.

ILO Unemployed: The unemployed compromise all persons above 16 who are without work, that is, not in paid employment or self employment, currently available for both paid employment or self-employment and seeking work with specific steps taken to seek either employment or self employment. This includes, registration at a public or private employment exchange, application to employers, checking worksites, farms, factories, newspapers, advertisements etc.

[16]Child, D. (1973) *The Essentials of Factor analysis.* In T. Hick & M. McFrazier (Ed.), *College Student Self-efficacy Studies*. New York: University Press of America.

ILO Inactive: The economically inactive population comprises all persons who are neither employed nor unemployed. This population is split into four groups; attendant at educational institutions, retired, engaged in family duties and other economically inactive.

Deprivation: The NI Multiple Deprivation Measure (NIMDM 2010) is a measure of deprivation at the small area level. The model of multiple deprivation is based on the idea of distinct dimensions of deprivation which can be recognised and measured separately. People may be counted as deprived in one or more of the domains, depending on the number of types of deprivation they experience. Quintiles of deprivation categorise to what extent a person is living in deprivation and experiencing one or more of these dimensions; Q1 recognises the 20% most deprived areas in which people live with Q5 representing the 20% least deprived.

Dependants

An individual is defined as having dependants if they have responsibility for either care of a child(ren), a person with a disability or a dependant elderly person.

Urban/Rural

The data have also been analysed by whether respondents are living in SOA's that have either been categorised as urban or rural. The definitions for an urban/rural SOA are outlined in the 'Technical Guidance on production of official statistics for Settlements and Urban-Rural Classification' (May 2016)[17]. This report classified each settlement in Northern Ireland into one of eight bands (A-H), bands A-E (i.e. those with a population of greater than or equal to 5,000) can be defined as urban and bands F-H (i.e. those with a population of less than 5,000) as rural.

Health

The CHS outlines 5 distinct health categories by which respondents classify their health status; these are 1) Very Good, 2) Good, 3) Fair, 4) Bad and 5) Very Bad. For the purposes of this bulletin both very good/good and bad/very bad has been combined to create three health groups under which respondents are classified. These are 1) Very good/good, 2) Fair and 3) Bad/very bad.

Religious Classifications

Interviewers collected information on the religion of residents aged 16 and over in each household, the religious categories represented within the questionnaire were as follows:

Catholic
Presbyterian
Church of Ireland
Methodist
Baptist
Free Presbyterian
Brethren
Protestant – not specified
Christian – not specified
Buddhist
Hindu
Jewish
Muslim
Sikh
Any other religion
No religion

[17] http://www.nisra.gov.uk/archive/geography/settlement15-guidance.pdf

In terms of the CHS data the aforementioned religious groups were coded into three distinct categories, as follows:

1. Catholic
2. Protestant – to include Presbyterian, Church of Ireland, Methodist, Baptist, Free Presbyterian, Brethren, Protestant – not specified and Christian – not specified.
3. Other/Non-determined – to include Non Catholic/Protestant religions, respondents that did not specify a religion, and for those for whom religion could not be determined.

Within this report when the terms Catholic, Protestant and Other/Non-determined are used they composite the different religious denominations and traditions outlined above.

Quality Improvement Fund research

This report has been informed by research conducted by Queens University, Belfast which was supported and contributed to by the ONS Methodological Advisory service funded through the Quality Improvement Fund (QIF)[18]. The research was titled '*Investigating Locus of Control, Self-efficacy and Wellbeing – The relationship between all items across 3 instruments for a single item scale*'.

This report examined the key constructs of Locus of Control (LOC) and Self-efficacy (GSE) and how they relate to individual Wellbeing, through analysis of data from the Belfast City Council (BCC) Resident Survey and the Continuous Household Survey (CHS). Previous research suggested that both internal LOC and self-efficacy are important constructs which predict higher wellbeing and life satisfaction among individuals and the Queen's research supported this.

The aim of this research was to assess if all three constructs were linked and whether they were significant predicators of one another and assess the feasibility of developing one overall scale of measurement which encompassed the three metrics together. Despite finding that higher wellbeing is partially mediated by self-efficacy and internal locus of control, it was concluded that the three metrics could not be measured on the same scale and must be treated as the three separate constructs they are.

The research conducted by Queens University has also influenced the use of a 5 item scale to measure self-efficacy rather than an alternative number of items. For self-efficacy, an exploratory factor analysis revealed that on the 5 item scale all items loaded highly and consistently onto a single underlying latent factor. For example, the self-efficacy scale when utilising the data from the CHS and Belfast City Council recorded loadings of .66-.81 and .81-.86 respectively, on a scale of 0 to 1 with higher being stronger. The exploratory factor analysis suggests that the self-efficacy scale functioned as a coherent and strong scale with the five items, this is further reflected in the good internal consistency, highlighted by the scales high Cronbach's alpha score (.854 in 2014/15 and .860 in 2015/16).

[18] This research was funded by the Quality Improvement Fund (QIF). The QIF was provided by the UK Statistics Authority each year to the Government Statistical Service to support improvements in quality and trust in official statistics.