



National Unit Specification

General information

Unit title: Understanding Brain Health (SCQF level 6)

Unit code: J77J 46

Superclass: PH

Publication date: March 2023

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

This unit is a mandatory unit of the level 6 Mental Health and Wellbeing Award but is also available as a free-standing unit. It may provide progression for those learners who have successfully completed the level 5 Mental Health and Wellbeing award. It is also suitable for learners who have not previously studied mental health and wellbeing at level 4 or 5.

This unit will be of interest to anyone who wishes to work in the service industry or health and social care. It may also be suitable for those who wish to study occupational health and human resources.

The purpose of this unit is to introduce learners to the physiology and functionality of the brain. Learners will learn about how the brain changes throughout life, and why it is important to understand brain structure, function, morphology and how to take care of it if we are to maintain good mental health and wellbeing. Learners will also explore how mental health problems can be prevented and what we mean by brain plasticity and neurogenesis.

Outcomes

On successful completion of the unit the learner will be able to:

1. Explain the function of the brain.
2. Demonstrate an understanding of factors which can cause changes to the brain and their impact on mental health and wellbeing.
3. Demonstrate how maintaining good brain health can promote mental health and wellbeing.

National Unit Specification: General information (continued)

Unit title: Understanding Brain Health (SCQF level 6)

Credit points and level

1 National Unit credit at Scottish Credit and Qualifications Framework (SCQF) level 6: (6 SCQF credit points at SCQF level 6).

Recommended entry to the unit

While entry is at the discretion of the centre, learners would normally be expected to have attained one of the following, or equivalent:

- ◆ The level 5 award in Mental Health and Wellbeing.
- ◆ The level 5 Understanding Mental Health Issues unit.
- ◆ The skills, knowledge and understanding required for successful completion of level 5 units.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the support notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

Context for delivery

If this unit is delivered as part of a group award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

The Assessment Support Pack (ASP) for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

National Unit Specification: Statement of standards

Unit title: Understanding Brain Health (SCQF level 6)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Explain the function of the brain.

Performance criteria

- (a) Describe the basic structure of the sympathetic nervous system in relation to its role in self-regulation.
- (b) Describe the basic anatomy of the brain.
- (c) Describe the structure of a neuron.
- (d) Describe the function of neurotransmission.
- (e) Explain how our brain, body and environment interact.

Outcome 2

Demonstrate an understanding of factors which can cause changes to the brain and the impact on mental health and wellbeing.

Performance criteria

- (a) Define 'brain plasticity'.
- (c) Describe a range of factors which can affect 'brain plasticity'.
- (d) Explain why it is important to understand factors which may impact on brain plasticity and mental health and wellbeing.

Outcome 3

Demonstrate how maintaining good brain health can promote mental health and wellbeing.

Performance criteria

- (a) Define the term neurogenesis.
- (b) Describe a range of factors that can adversely impact on neurogenesis.
- (c) Describe a range of actions that individuals can do to promote neurogenesis.
- (d) Explain how promotion of neurogenesis can improve mental health and wellbeing.

National Unit Specification: Statement of standards (continued)

Unit title: Understanding Brain Health (SCQF level 6)

Evidence requirements for this unit

Evidence is required to demonstrate that learners have achieved all outcomes and performance criteria. Evidence can be gathered in a range of ways which will assess learners' knowledge, understanding and application across the outcomes and performance criteria.

Where learners have worked in a group, there should be evidence of their individual contribution.

Outcome 1

Learners must:

- ◆ Describe the sympathetic nervous system.
- ◆ Label and describe **five** parts of the brain.
- ◆ Describe the function of a neuron.
- ◆ Define the term neuro transmission.
- ◆ Provide an explanation of how the brain, body and environment interact and manifest emotional responses.

Outcome 2

Learners must:

- ◆ Provide a definition of brain plasticity.
- ◆ Describe **six** factors that impact on brain plasticity.
- ◆ Explain the importance of brain plasticity for our mental health and wellbeing.

Outcome 3

Learners must:

- ◆ Provide a definition of the term neurogenesis.
- ◆ Describe **three** factors which impact adversely on neurogenesis.
- ◆ Describe **three** actions which impact positively on neurogenesis.
- ◆ Provide an explanation of how we can maintain good brain health to promote positive mental health and wellbeing.



National Unit Support Notes

Unit title: Understanding Brain Health (SCQF level 6)

Unit support notes are offered as guidance and are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this unit

Those involved in the delivery of this unit should be aware of the potentially sensitive nature of some of the issues to be discussed and investigated, particularly in relation to individual learner's circumstances. For facilitators, knowledge of public health and social sciences would be advantageous.

The content of the level 6 award follows on from the level 4 and 5 mental health and wellbeing awards. It is important to re-emphasise that these awards are not an exploration of mental illness but designed to encourage learners to consider the knowledge which informs a much broader understanding of mental health and wellbeing in relation to individuals and for wider society.

The learning outcomes provide the facilitator with an opportunity to design a learning experience which is personalised to the learners. There is scope to study a wide range of theories and topics of specific interest.

Outcome 1

This learning outcome is an introduction to the anatomy of the brain, the sympathetic nervous system and how our brain, body and emotions respond to internal and external stimuli. Use of arts-based materials or multi-media tools can be used to encourage learners to build 3D brains and neurons, and interactive activities are recommended to explain how the brain functions. This should be a fun and engaging opportunity to encourage learners to take a journey through the brain and learn about how it functions.

For those that have previously studied the level 5 Understanding Mental Health Issues unit, this will be an opportunity to build on knowledge of the Triune Brain. If this is the learner's first introduction to the brain, starting with McLean's Triune Brain is a good basis to build from.

Learners are not expected to be experts in brain anatomy but should understand that the brain performs a series of core functions that contribute to mental health and wellbeing as well as to ensure our survival and enable us to thrive in our environment. This includes short term and long term memory formation, emotional responses, protecting the body from harm, problem solving, rationalising, the senses (sight, sounds, touch, smell), language, communication, and reflexes.

National Unit Support Notes (continued)

Unit title: Understanding Brain Health (SCQF level 6)

There are a wide range of accessible materials referred to in the reference list to support facilitators. For those who are new to this topic area, Gabya Toleikyte's (2021) '*Why the Fxxk can't I change? Insights for a neuro-scientist to show that you can*', provides a very accessible explanation of the brain and directly references Paul McLean's Triune Brain from the 1960s as a basis to build upon. However, the Triune Brain is a debated model and other neuroscientists such as Lisa Fieldman Barrat (2020) *71/2 lessons about the brain*, refers to a biological walk through the brain. Facilitators are free to encourage discussion using both approaches but will be required to look beyond McLean's model to achieve the evidence requirements.

When considering the function of the sympathetic system, facilitators should consider the fight, flight, freeze response, the regulation of body temperature and cardiovascular effects. Learners will also explore the chemical, hormonal and electrical transmissions which support the neural highways around our bodies constantly sending messages about how to respond to internal and external stimuli. By beginning to understand these physiological responses we can start to put our emotional responses into context. Our own and others emotional responses are, on the most part, unconscious and automatic, geared to ensure our survival. Learners will consider why this is and why is it so difficult to learn how to read or interpret emotional responses and regulate our own emotions.

Outcome 2

Neuroscience has proven that our brain can rewire itself structurally and functionally as a result of both internal and external stimulus. This has been revolutionary and has changed how we think about recovery from trauma, addictions, and mental illness. It is also crucial for how we influence the development of children to promote brain health in early years, understand neuro variance and adolescence as a neurodevelopmental phenomenon.

Facilitators are free to explore a range of circumstances and situations which may affect brain plasticity and shape the learning experiences based on the interests and experiences of the learners. Some topic areas which could be explored include:

- ◆ sensory stimuli.
- ◆ psychoactive drugs.
- ◆ gonadal hormones.
- ◆ parental-child relationships.
- ◆ peer relationships.
- ◆ early stress.
- ◆ intestinal flora.
- ◆ diet.
- ◆ brain injury.

On completion of this learning outcome, learners will have a better understanding of brain plasticity and the benefits and potential limitations for promoting mental health and wellbeing.

National Unit Support Notes (continued)

Unit title: Understanding Brain Health (SCQF level 6)

Outcome 3

This learning outcome will study the latest research about how we can make simple changes to mitigate future damage to our mental health and wellbeing. Some of these activities are perhaps unsurprising but some are less conventional and shine a light on the effect of modern day living and work environments, the effects of technology, pollutants and sedentary lifestyles.

Neurogenesis explains how we are constantly renewing our brain and neuroscientific studies evidence that, even as adults, we continue to produce new neurons every day. This has been an incredibly important discovery for brain health as it was previously thought that when we reached adulthood our brains remain static or deteriorated. In fact, once we reach approximately 50 years of age, according to Dr. Sandrine Thuret, we will have completely replaced all of our childhood neurones with adult neurons. Dr. Thuret and many other neuroscientists are now able to provide scientific evidence for what supports good brain health, healthy brains potential and what our lifestyles and choices are doing to our brain health.

Neurogenesis persuades us to consider the need to be holistic in our approach to maintaining good mental health and wellbeing. This includes being more knowledgeable about the food we eat and the effect it is having on our brain. For example, we know that certain nutrients and vitamins are good for brain health but have you also considered the importance of food textures and the frequency of when we eat? You have heard the phrase 'use it or lose it' but is it that simple?

This outcome is also an introduction to the practical things we can do to maintain good brain health. Sarah Mckay, Sandrine Thuret, Gabya Toleikyte's, discuss a range of factors which influence neurogenesis and the different activities we can employ across the life course for now and the future.

There is a plethora of knowledge which informs contemporary understanding of the brain. This knowledge is also continually changing and updating. Facilitators should be aware of this and keep abreast of the most up to date research.

Guidance on approaches to delivery of this unit

It may be helpful to cover the content of this unit on an outcome by outcome basis, in the order presented in the unit. The person delivering this unit should have experience or knowledge of safeguarding individuals as some of the course content may directly relate to individual learners.

Learners should be made aware of the various sources of support available to them within the classroom, the institution and local supports and recommended online supports. Other sources of support include:

National Unit Support Notes (continued)

Unit title: Understanding Brain Health (SCQF level 6)

Information Sources:

NHS Inform <https://www.nhsinform.scot/illnesses-and-conditions/mental-health>

Clear Your Head — ScotGov <https://clearyourhead.scot/>

Aye Feel — Young Scot <https://young.scot/campaigns/national/aye-fee>

Helplines and text services:

Childline: 0800 1111

YoungMinds Crisis Messenger text service:

Text YM to 85258

Text SHOUT to 85258 <https://giveusashout.org/>

Samaritans:

Call 116 123

Chat online

Email jo@samaritans.org

Breathing Space

Call 0800 838587

<https://breathingspace.scot/>

Use of social media such as YouTube and podcast materials, documentaries and online resources could form part of the delivery along with guest speakers, classroom discussions and research activities.

Guidance on approaches to assessment of this unit

To achieve this unit, learners must meet all learning outcomes and evidence requirements. Where possible centres should ensure assessments are integrated into learning and generated naturally through the teaching and learning experience. When learners experience a range of assessment methods it helps them to develop different skills that should be transferable to work or further and higher education.

Assessment evidence can be drawn from a variety of sources and presented in a variety of formats. The evidence does not need to be gathered in one activity but can be assembled from a variety of tasks and assessments carried out throughout the unit. Evidence may be presented for individual outcomes or gathered for the unit or alongside other units in the award.

Those delivering the unit should use their professional judgement, subject knowledge and experience, and understanding of their learners, to determine the most appropriate ways to generate evidence.

National Unit Support Notes (continued)

Unit title: Understanding Brain Health (SCQF level 6)

Evidence can be generated using different types of assessment. There may be other methods that would be more suitable to learners. The following are suggestions only:

- ◆ information leaflet.
- ◆ poster.
- ◆ report.
- ◆ a presentation or a filmed interview or documentary.
- ◆ wiki report/blog.
- ◆ podcast.
- ◆ or any other appropriate method agreed by the learner and assessor.

Centres are encouraged to submit centre-devised assessment for prior verification to ensure that the national standard is being met.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the evidence requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

Opportunities for developing aspects of Core Skills should be incorporated where they arise naturally in the teaching and learning process. Teaching methods such as class discussion will develop Communication skills there may also be opportunity for debate and presenting arguments depending on the facilitation of the learning activities. Learners may also have the opportunity to develop Information and Communication Technology (ICT) and presentation skills through research and presentation. It may be possible to undertake group work as part of the research for this unit in which case learners could develop skills relating to Working with Others. Learners will also have the opportunity to develop problem solving skills as they develop the ability to think critically about mental health and wellbeing. As learners investigate evidence to support their investigations on perspectives, theories and models they will have the opportunity to develop Numeracy skills as they may come across statistical data and graphs.

Consideration of their own 'digital footprint' may provide opportunity for development of **employability and citizenship skills** and developing a deeper more informed understanding of mental health and wellbeing will enable learners to proactively manage their own mental health and wellbeing and more effectively support colleagues and peers.

History of changes to unit

Version	Description of change	Date

© Scottish Qualifications Authority 2023

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Business Development and Customer Support team, telephone 0303 333 0330.

Unit template: June 2017

General information for learners

Unit title: Understanding Brain Health (SCQF level 6)

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This unit will provide learners with the opportunity to learn about brain anatomy and a basic introduction to neuroscientific concepts of brain plasticity and neurogenesis. This unit is designed to be interactive and learners will be expected to build their own brain, learn about the sympathetic nervous system and how neurons and neural transmission support a highway of messages around the body.

This unit is suitable for anyone who has interest in developing a deeper understanding of mental health and wellbeing. It may be of particular interest to anyone wishing to work in human resources, community development, public policy and public health, public sector and frontline services, such as health and social care, medicine or emergency services.

While entry is at the discretion of the centre, learners would normally be expected to have attained one of the following, or equivalent:

- ◆ The level 5 award in Mental Health and Wellbeing.
- ◆ The level 5 Understanding Mental Health Issues unit.
- ◆ The skills, knowledge and understanding required for successful completion of level 5 units.

The content of the level 6 award follows on from the level 4 and 5 mental health and wellbeing awards. It is important to re-emphasise that these awards are not an exploration of mental illness but designed to support learners to consider the knowledge which informs a much broader understanding of mental health and wellbeing for the individual and for wider society.

On successful completion of the unit the learner will be able to:

1. Explain the function of the brain.
2. Demonstrate an understanding of factors which can cause changes to the brain and the impact on mental health and wellbeing.
3. Demonstrate how maintaining good brain health can promote good mental health and wellbeing.

You will gain knowledge of the brain and how to maintain good brain health. You will consider the most recent research and publications which informs how we understand the brain. You will also develop the skills to curate information available to you and consider what is credible and informed.

Assessment evidence can be drawn from a variety of sources and presented in a variety of formats. The evidence does not require to be achieved in one activity but can be assembled from a variety of tasks and assessments carried out throughout the course. Evidence may be presented for individual outcomes or gathered for the unit or alongside other units in the award.

General information for learners (continued)

Unit title: Understanding Brain Health (SCQF level 6)

You must meet **all learning outcomes and evidence requirements** to fully achieve this unit. You could demonstrate your knowledge using a range of methods which could include:

- ◆ information leaflet.
- ◆ poster.
- ◆ report.
- ◆ presentation, filmed interview or documentary.
- ◆ wiki blog/report.
- ◆ podcast.
- ◆ or any other appropriate method.