



# FUTUREquipped

## Health and Care Sector

Supporting Adults with Mental Health  
Issues in SMART Homes

UNIT

4

Funded by:



Scottish Funding Council

Promoting further and higher education

Designed and delivered  
in collaboration by:

CONSTRUCTION  
SCOTLAND  
INNOVATION  
CENTRE



DIGITAL  
HEALTH & CARE  
INSTITUTE

# Learning outcome

Understand and identify how digitally enabled technology and SMART Homes can support people's mental health at home.



# The benefit of SMART Homes and virtual reality in treating mental health issues.

## Introduction

**M**ental health problems can affect the way an individual feels and behaves. Mental health affects around one in four people in Britain, and ranges from common mental health problems, such as depression and anxiety, to rarer problems such as schizophrenia and bipolar disorder. Currently in Scotland 1 in 10 children and young people aged five to sixteen have a clinically diagnosable mental illness.



Follow the link to read more:

[http://www.audit-scotland.gov.uk/uploads/docs/report/2018/nr\\_180913\\_mental\\_health.pdf](http://www.audit-scotland.gov.uk/uploads/docs/report/2018/nr_180913_mental_health.pdf)

There is very little research on the use of SMART Homes to support someone with a mental health issue. However, there are effective ways that can support life at home with a mental health issue. Mental health can affect the way in which you live your daily life, however technological advancements have meant that home automation can help.

CE Pro, the leading trade magazine for home technology pros, states that there are benefits to owning a SMART Home. Home automation systems satisfy neurological, physiological and psychological instincts in humans. As humans we have an inbuilt need to be able to control our environment based on the desire to survive; until now that has been limited. With the introduction of smart technology we now have that control which impacts/improves on our sense of wellbeing - our mental health.

Follow the link to find out more: [https://www.cepro.com/article/smart\\_homes\\_mental\\_health\\_benefits](https://www.cepro.com/article/smart_homes_mental_health_benefits)

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# Key drivers for SMART Homes and dementia now and in the future

Following on from the key drivers in the introductory booklet Section 2 p.3, the following are specific to the topic of this micro learning unit.

## **Scottish Government Mental Health Strategy:**

Main vision is a Scotland where people can get the right help at the right time, expect recovery, and fully enjoy their rights, free from discrimination and stigma.

Follow the link to read more:

[https://www.legco.gov.hk/general/english/library/stay\\_informed\\_overseas\\_policy\\_updates/mental\\_health\\_strategy.pdf](https://www.legco.gov.hk/general/english/library/stay_informed_overseas_policy_updates/mental_health_strategy.pdf)

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# Who are the key players and what is their role / interest / level of influence?

Following on from the key players in the introductory booklet Section 3, p.4 the following are specific to the topic of this micro learning:

See Me Scotland:

<https://www.seemescotland.org/>

Breathing Space:

<https://breathingspace.scot/>

Samaritans:

<https://www.samaritans.org/scotland/samaritans-in-scotland/>



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# Scottish Innovation Centres most closely linked to the theme

Following on from the Innovation Centres in the introductory booklet Section 4, p.5 the following are specific to the topic of this micro learning:

**Digital Health & Care Institute (DHI)** - Research more on the use of SMART Homes and Technology to support individuals living with Mental Health issues by developing new ideas and approaches using technology.

**CENSIS** - Creating technology that makes adjustments to the environment in response to changes in an individual's tone of voice/ facial expression.



# Desired outcome in relation to key challenges and opportunities for the development / adoption.

Following on from challenges/ opportunities in the introductory booklet Section 5, p.6:

**Opportunities:** Further research on Mental Health and SMART Homes. Further promotion of positive mental well-being and Mental Health awareness and the possible benefits of digital technologies.

**Challenges:** Very little research/evidence relating to Mental Health and SMART Homes, plenty evidence of Physical Care / Health. People are unwilling to discuss what support may help them due to the stigma associated with mental health.

**Desired Outcome:** Increasing awareness/ acceptance across society of the potential that smart technology and SMART Homes have in relation to improving everyone's' Mental Health.



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The following tasks will enable you to investigate SMART Homes and Assistive Technologies in relation to living with sight mental health issues.

On completion of all three tasks you will be able to test your knowledge by completing Assessment 1 and Assessment 2.

### Task 1

Follow the link below to read the article “4 Ways AI and IoT [Internet of Things] Tech Can Help Solve Mental Health Problems” written by Kayla Mathews.

<https://www.iotforall.com/4-ways-ai-iot-help-solve-mental-health-problems/>

### Task 2: Video clip 1.1

Virtual Therapy: New software is helping patients around the world to relieve mental health conditions like PTSD and Alzheimer’s.

Video clip 1.1 <https://youtu.be/5KIa3nNmMAc>

### Task 3

Follow the link to access “The Future of Connected Home Health” by Collette Johnson. Go to Part 2 Virtual Reality- the Connected Home Health Enabler read p11- p13.

<https://www.plextek.com/wp-content/uploads/2016/07/The-future-of-connected-home-health.pdf>

### Case study 1:

Video clip 1.2 explains how the Mental Health industry is undergoing a VR revolution, with VR Exposure Therapy helping patients and psychiatrists aide the recovery process.

Video clip 1.2 <https://youtu.be/jWNFyJMDi30>

**Now complete Assessment 1.**

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# Assessment 1

Multiple Choice Assessment (10 questions)

Download the KAHOOT App onto your phone, using your laptop/computer click the link <https://play.kahoot.it/#/?quizId=6412583c-1a40-4cbf-bb98-faafd3649f09>

1. **Open the APP on your phone Click Classic Play**
2. **Enter Pin**
3. **Choose a nickname**
4. **Click OK, go**
5. **Click START button on laptop screen**
6. **Test your knowledge on what you have learned from the tasks above by clicking the corresponding colour/symbol on your phone that identifies the answer you wish to choose.**
7. **After each question click NEXT to move onto the next question**
8. **Have fun!**

**Now move on to Assessment 2**

## Assessment 2 - Case Study 2

This assessment requires you to reflect on previous learning that has taken place within this unit.

Reporter for Victoria Derbyshire Jean Mackenzie met with psychologists and computer scientists who are testing Virtual Reality to see whether it could be used to treat mental health conditions.

Follow the link to find out more: <https://youtu.be/r7tY07QY66A>

### **Case Study 2.**

You are caring for a 32 year old man who is living with depression; he wants to try using a VR headset as part of his treatment.

Having watched the above report and referring to knowledge gained from tasks 1-3, come up with ideas on how the VR headset could be used as treatment for depression and discuss the benefits and pitfalls that the service user may experience.

Write a 500 word report detailing your findings.

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# Digital Assets

1. Virtual Therapy: <https://youtu.be/5KIa3nNmMAc>
2. VR Exposure Therapy: <https://youtu.be/jWNFyJMDi30>
3. Jean Mackenzie Report: <https://youtu.be/r7tY07QY66A>

BBC News. (2017). Could virtual reality help treat anxiety? - BBC News. Retrieved from <https://www.youtube.com/watch?v=r7tY07QY66A&feature=youtu.be>

Breathing Space is a free confidential service for people in Scotland. Open up when you're feeling down - phone 0800 83 85 87. (n.d.). Retrieved April 10, 2019, from <https://breathingspace.scot/>

Johnson, C. (2016). The Future of Connected Home Health. Retrieved from Plextek website: <https://www.plextek.com/wp-content/uploads/2016/07/The-future-of-connected-home-health.pdf>

Journeyman Pictures. (2016, July 4). Virtual Reality Used To Treat Mental Health Problems - YouTube. Retrieved April 10, 2019, from <https://www.youtube.com/watch?v=5KIa3nNmMAc&feature=youtu.be>

Matthews, K. (2019, January 30). 4 Ways AI and IoT Tech Can Help Solve Mental Health Problems | IoT For All. Retrieved April 10, 2019, from <https://www.iotforall.com/4-ways-ai-iot-help-solve-mental-health-problems/>

Samaritans in Scotland. (n.d.). Retrieved April 10, 2019, from Samaritans website: <https://www.samaritans.org/samaritans-in-scotland/>

Scottish Government. (2017). Mental Health Strategy: 2017-2027. Retrieved from [https://www.legco.gov.hk/general/english/library/stay\\_informed\\_overseas\\_policy\\_updates/mental\\_health\\_strategy.pdf](https://www.legco.gov.hk/general/english/library/stay_informed_overseas_policy_updates/mental_health_strategy.pdf)

See Me is Scotland's Programme to tackle mental health stigma and discrimination. (n.d.). Retrieved April 10, 2019, from <https://www.seemescotland.org/>

Unleashed VR. (2018). UNVR: VR Exposure Therapy Case Studies. Retrieved from <https://www.youtube.com/watch?v=jWNFyJMDi30&feature=youtu.be>

Weinberg, J. (2017, October 16). Mental Health Benefits of Owning a Smart Home. Retrieved April 10, 2019, from [https://www.cepro.com/article/smart\\_homes\\_mental\\_health\\_benefits](https://www.cepro.com/article/smart_homes_mental_health_benefits)

These materials were produced by college lecturers as part of the FUTUREquipped project in 2018. The project was funded by the Scottish Funding Council and designed and delivered in collaboration by the Digital Health and Care Institute and the Construction Scotland Innovation Centre.