Exploring factors influencing the application of behavioural science within public health practice across Wales

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World Health Organization Collaborating Centre on Investment for Health and Well-being

Uned Gwyddor Ymddygiad
Behavioural Science Unit

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Behavioural Science Unit:

The Public Health Wales Behavioural Science Unit was launched in May 2022 to provide specialist expertise on behavioural science, and develop the application of it, to improve health & wellbeing in Wales. The Unit is part of the World Health Organisation (WHO) Collaborating Centre on Investment in Health and Wellbeing.

For further information, or support around the application of behavioural science to improve and protect health and wellbeing in Wales please get in touch.

Mae'r ddogfen hon ar gael yn Gymraeg / This document is available in Welsh

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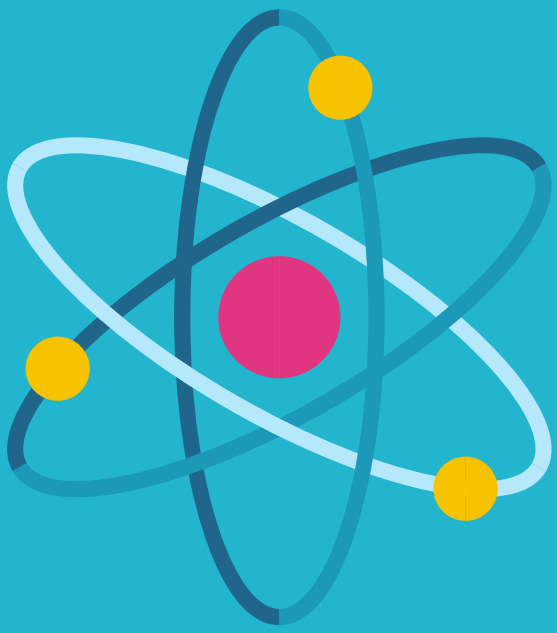
Executive Summary



Introduction and Context

Behaviours play a key role in improving health and wellbeing. Identifying and understanding behaviours and factors that influence them, and how best to address these factors is integral to achieving the ambitions of public health policy and practice. There is increasing evidence that public health interventions that are informed using behavioural science models and frameworks are more effective than interventions without a theoretical underpinning. To enable wide scale adoption of behavioural science, there is a need to better understand existing capabilities and operating environments/systems, and to identify how best to enhance and optimise the use of such approaches across the public health workforce in Wales. The Behavioural Science Unit, in collaboration with experts at the University of Bangor, explored factors influencing the application of behavioural science across Wales. This summary provides an overview of the methods, key findings and reccommendations.

Methodology

Embedding behavioural science invovles teams and individuals changing their behaviour; behaviour change models can therefore be beneficial in exploring factors influencing professional practice. This work utilised behavioural science models and frameworks including the COM-B model, the Behaviour Change Wheel, and the Theoretical Domains Framework to explore the views and experiences of public health practitioners and leaders. Both qualitative and quantitative insights were collected through interviews, focus, groups, workshops, and a survey.

Findings

In total, over **100** **stakeholders,** primarily public health practitioners, engaged in this work and shared their views and experiences of behavioural science.

The insights gained indicate that behavioural science is being applied within public health policy and practice but is done opportunistically and on an ad hoc basis rather than as routine practice. Where behavioural science is applied, it is generally focused on collation of behavioural insights with a reliance on communications and marketing as an approach to influencing behaviours.

The **potential of behavioural science to enhance current practice was widely acknowledged.** It was recognised that behavioural science could provide a structured approach to identifying and prioritising behaviours as the focus of public health policies and interventions. **Frameworks such as the COM B model could enable a more structured approach to public engagement and ensure that problems are fully explored before considering solutions.** Such approaches could also encourage increased collaboration and co-production with both the public and other professionals.

To better understand the factors influencing the routine use of behavioural science, insights gained from the qualitative and quantitative methods were **mapped to the COM-B** model as summarised in the below table:

There is a **strong desire amongst stakeholders to advance the use of behavioural science** by ensuring that behavioural insights are used to inform the development and delivery behaviour change interventions. This would help in ensuring that barriers to a target behaviour, as identified within the insights, are addressed by the intervention and that the most appropriate intervention type is selected.

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Barriers and enablers to the routine application of behavioural science

COM-B component	Barriers	Facilitators
Capability	• Limited knowledge of when/how to apply the approach • Limited skills to support application • Perception that the approach is focused only on individual level change • Difficulties in identifying and prioritising target behaviours and target groups contributing to complex public health problems • Unaware of gaps in skills and knowledge	• Case studies of applied behavioural science • Clarity on the knowledge/skills/competences required for different public health professionals • 'How to' resources (e.g., Tools to guide collation of insights/to help in identifying target behaviours, and to show how to use insights to inform intervention development) • Training that focuses on changing practice and not just increasing knowledge and understanding
Opportunity	• Colleagues/partners willingness and/or ability to use, support and promote this way of working • Social norms – current focus on solutions before fully understanding the problem • Reactive/fast paced way of working • Limited time/capacity • Lack of real world, relatable examples	• Support from senior managers in ensuring/allowing time to apply behavioural science • Engaging with and influencing colleagues and partners in adopting a behavioural science approach • Access to a support network/community of practice • Leadership support/advocacy/influence • Access to tools, resources, and templates to support behavioural science application
Motivation	• Low confidence in ability to apply behavioural science • Habit of jumping to solutions before fully understanding the problem • Assume already know the answers/solutions	• Add prompts to consider behavioural science within tools and processes • Embed behavioural science in the full project management cycle • Embed behavioural science within PHW guidance/approaches e.g., Whole System Approaches, Wider Determinants of Health, Quality Improvement

Recommendations

The insights collated indicate that increasing the application of behavioural science within public health policy and practice requires changes at the organizational, team, and individual level. Informed by the COM-B model and Behaviour Change Wheel, the below actions are recommended for addressing the barriers, and enhancing the facilitators.

- Provide access to training and education to increase knowledge of behavioural science approaches including when and how they can enhance policy and practice.
- Develop skills in the practical application of behavioural science. This will help in building confidence and managing time demands by showing how the approach can be adapted in response to the time and resources available. Developing skills and confidence will in turn help to strengthen habitual engagement in the use of behavioural science.
- Enable access to behavioural science tools, guidance, and resources.
- Enable increased connection and collaboration across the system and facilitate sharing of practice through a Community of Practice for Wales.
- Provide cues and prompts to encourage use of behavioural science within public health systems and processes, for example integrating behavioural science into public health planning documentation.
- Integrate behavioural science with other public health approaches including Wider Determinants of Health, Quality Improvement, Whole System Approaches, and Research and Evaluation.
- Further understand how to support leaders and senior managers in advocating for the use of behavioural science and creating working environments conducive to this way of working.

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Introduction and Context

Behaviours play a key role in improving health and wellbeing. Identifying and understanding behaviours and factors that influence them, and how best to address these factors is integral to achieving the ambitions of public health policy and practice. There is increasing evidence that public health interventions that are informed using behavioural science models and frameworks are more effective than interventions without a theoretical underpinning. Several studies have shown that behavioural science can inform effective interventions for public health issues such as addressing the Covid-19 outbreak (Lunn et al., 2021), providing respectful maternity care (Smith et al., 2020), and enhancing occupational safety of healthcare workers (Guerin et al., 2021). To enable wide scale adoption of behavioural science, there is a need to better understand existing capabilities and operating environments/systems, and to identify how best to enhance and optimise the use of such approaches across the public health workforce in Wales.

Factors influencing the use of behavioural science within public health teams have been explored in several studies. Barriers identified include limited access to good quality research and concerns around the clarity, relevance, and reliability of research findings in relation to public health. (South and Lorenc, 2020; Oliver et al., 2014; Curtis et al., 2018; Bryne-Davis et al., 2022). Similarly, lack of supportive infrastructure, limited behavioural science expertise, and overwhelming amounts of literature have been found to be barriers to the use of behavioural science in UK public health settings during the COVID 19 pandemic (Byrne-Davis et al., 2022). Alongside this, there appears to be a preference for the use of local evidence rather than national guidance or empirical research findings (Atkins et al., 2017; Armstrong et al., 2014). Curtis, Fulton, and Brown (2018) found that limited understanding of the value of behavioural science and limited comprehension of behaviour change approaches are also barriers. In relation to facilitating factors, the role of leaders as advocates of behavioural science and in creating supportive environments that enable such methodologies to be embedded into policy and practice have also been identified as key drivers.

In 2019, a survey was conducted with Public Health Wales employees to understand existing skills and knowledge and to identify behavioural science training needs; 220 staff members, from a total of 515, completed this survey. Respondents included public health practitioners, leaders, and administrators. Survey results showed that overall staff reported that they applied behavioural science in less than half of the opportunities available to do so, with less than a fifth of participants applying behavioural science routinely. Further, whilst most staff believed behavioural science to be important, many were not confident in applying it. The greatest barrier reported by staff was a lack of knowledge in how to apply behavioural science in practice; additional factors reported to influence practice included time, resources, support from peers and leaders, access to behavioural science expertise, and an enabling work environment.

The context in which the public health workforce operates has changed significantly since 2019; the Covid-19 pandemic has influenced both the focus of public health strategy but also the way in which the public health workforce operates. The value and importance of behavioural science was brought to the forefront due to the unprecedented role it played in responding to and managing the pandemic. It was during this period that the World Health Organisation Behavioural and Cultural Insights Unit was established to lead efforts, advance evidence, and provide technical guidance to countries on the use of behavioural science. In May 2022, the Public Health Wales Behavioural Science Unit was launched enabling increased access to behavioural science expertise, guidance and support in Wales.

In response to the changing context, and to build on the findings from the survey undertaken in 2019, the Behavioural Science Unit has undertaken further activity to enhance understanding of factors influencing the use of behavioural science within public health practice in Wales. This work was undertaken in collaboration with experts at the University of Bangor and took place between April and November 2022.

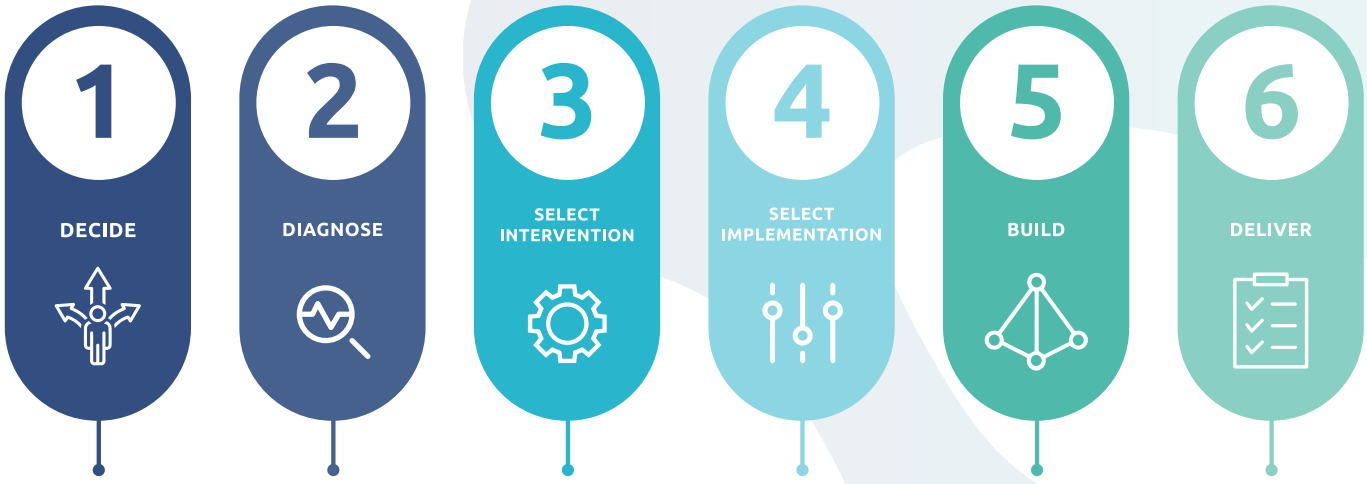
Methodology

Embedding behavioural science relies on individuals and teams changing behaviours; behaviour change models can therefore be beneficial in exploring factors influencing professional practice. The Capability, Opportunity, Motivation, Behaviour (COM-B) model (Michie et al., 2011) provides a framework for exploring the determinants of behaviours and has been applied to a range of health professional behaviours (Bull et al., 2019; Atkins et al., 2017; Heslehurst et al., 2014). The activity summarised within this report applied behavioural science models and frameworks including the COM-B model, the Behaviour Change Wheel (BCW) (Michie et al., 2011), and the Theoretical Domains Framework (TDF) (Cane et al., 2012). Using such models and frameworks, recommendations can be made as to the best way of addressing identified barriers (Michie et al., 2014).

This project applied a mixed methods approach to exploring behavioural science application within public health practice in Wales. Both qualitative and quantitative methods were utilised, including interviews, a focus group, workshops, and a survey, to explore the views and experiences of public health practitioners and leaders. Key objectives included:

- **Exploring current and potential application of behavioural science**
- **Understanding current knowledge of, and confidence in, applying behavioural science**
- **Identifying WHO needs to know WHAT to enable increased, routine application of behavioural science**
- **Identifying changes to practice that could enable increased, routine application of behavioural science**
- **Identifying drivers of behaviours that prevent and/or enable application of behavioural science**

As outlined in the recently published guidance Improving health and wellbeing: A guide to using behavioural science in policy and practice (West and Gould, 2022), applied behavioural science utilises a systematic approach to understanding behaviour and developing interventions to influence behaviour. The recommended steps are illustrated below; this project focused primarily on the first two stages, namely defining the target behaviour and target group, and undertaking a behavioural diagnosis using the COM-B model.



The methods employed are described in more detail below:

Interviews

Five interviews were undertaken with a range of stakeholders working within public health and/or contributing to public health outcomes. The interviews were undertaken by Bangor University and interviewees were identified using convenience sampling; interviews were conducted remotely using Microsoft teams. The interviews explored views and experiences of using behavioural science and what interviewees felt was needed to enable increased, routine application of behavioural science. Those interviewed represented a range of specialties, including Welsh Government, Public Health Wales, Green Group Wales, and Transport for Wales, and had varying degrees of experience in using behavioural science. A copy of the interview questions can be found in Appendix I.

Focus group

A focus group was facilitated with representatives from the Early Career Network; this is a peer support network for public health practitioners focused on skills and career development. Three Senior Public Health Practitioners, again recruited through convenience sampling, engaged in the one-hour focus group facilitated remotely using Microsoft Teams. The focus group was facilitated collaboratively by Bangor University and the Behavioural Science Unit and explored how practitioners identify projects / tasks that could be conducted using behavioural science and the processes, tools, support, and training needed to enhance application of behavioural science in both their own practice and that of their teams. An outline of the focus group can be found in Appendix II.

Workshops

In response to requests for support in enhancing the application of behavioural science, several workshops were developed and delivered by the behavioural science unit in collaboration with key stakeholders. Workshops were undertaken with teams who approached the Behavioural Science Unit for advice and guidance on increasing behavioural science capability. The workshops introduced behavioural science, shared case studies of applied behavioural science, explored how the approach is currently being used, considered opportunities for increased application, and identified factors that could help and/or hinder such changes to practice. The workshop plan is provided in Appendix III and further information on the workshops delivered is provided in Table.1.

Stakeholder group	Date of workshop	Length and delivery format	Number of attendees	Self-rated scores on confidence in personal knowledge and experience of behavioural science (0 – novice/10 – expert)
Betsi Cadwaladr Local Public Health Team	**23.05.22**	**2 hours 15mins via Microsoft Teams**	**22**	**Scores ranged between 1 and 6**
Cwm Taf Morgannwg Local Public Health Team (Vaccinations and Immunisations Team)	**26.06.22**	**2 hours via Microsoft Teams**	**8**	**Scores ranged between 4 and 7**
Cwm Taf Morgannwg Local Public Health Team (Healthy Weight, Healthy Wales Team)	**11.07.22**	**2 hours via Microsoft Teams**	**7**	**Scores ranged between 4 and 7**
Cardiff and Vale Healthy Workplace Network	**13.09.22**	**90 minutes via Microsoft Teams**	**16**	**Scores ranged between 0 and 8**
Vaccine Preventable Disease Programme Team	**11.10.22**	**90 minutes via Microsoft Teams**	**12**	**Scores ranged between 1 and 8**

Table.1. Summary of behavioural science workshops

Training session

As a result of one of the workshops delivered with a local public health team, they identified further learning needs with a specific focus on developing their skills in behavioural specification. Behavioural specification involves identifying and prioritizing behaviours to be changed, and whose behaviour needs to change, to inform the development and delivery of public health policies, services, and communications. The team had developed several system maps to support a whole systems approach to obesity and requested guidance in determining the best point at which to intervene and enable change within the system. One of the strategies identified to address this need, was the delivery of a bespoke training session to increase knowledge and skills in identifying and prioritising behaviours and populations using the system maps already generated. This workshop was delivered in person in August 2022 by the Behavioural Science Unit with 8 team members in attendance; an outline of the workshop can be found in Appendix IV. The learning and insights gained via the workshop are incorporated into these findings.

Survey

The survey was developed and implemented by the Office of Health Improvement and Disparities and the University of Hertfordshire to assess behavioural science capability within English Public Health Teams. With permission from the authors, minor adjustments were made to the survey to suit the contemporary Welsh context. The TDF informed the development of the survey which aimed to identify challenges in applying behavioural science to improve and/or protect public health in Wales. The survey consists of 23 statements based on the TDF domains which respondents were asked to rate using a five-point Likert scale. They were also asked to share their top five barriers to using behavioural science, five ideas/strategies to overcome these barriers, and anything else that could support in enhancing application of behavioural science. Through purposive sampling, the survey was disseminated to 150 stakeholders; 37 people responded to the survey with 23 completing all questions. A copy of the survey can be found in Appendix V.

Summary of Insights gained

In total, over 100 stakeholders engaged in this work and shared their views and experiences of behavioural science. Additionally, over the last twelve months, the behavioural science unit has connected and collaborated with a number of teams/individuals on a diverse range projects providing further opportunity to understand the current, and potential, role of behavioural science within public health policy and practice. All of this has enabled identification of barriers to, and facilitators of, applied behaviural science from the perspectives of the public health workforce. The insights gained from the methods described above have been synthesized and are summarised below.

i. Current application of behavioural science

The insights gained indicate that behavioural science is being applied within public health policy and practice but is done so opportunistically and on an ad hoc basis rather than as routine practice. Where behavioural science is applied, it is generally focused on collation of behavioural insights with few examples of how such insights are translated to the development and implementation of interventions. The challenges and complexities of using insights to inform public health policies, services, and communications, alongside limited time, resources, and capabilities appears to be limiting such practice.

Where interventions are designed and implemented, there is a reliance on communications and marketing as the approach to influencing behaviours. This appears to be the default intervention option meaning other, more appropriate interventions are often overlooked. This may be due to a lack of awareness of the various types of behaviour change interventions available, time and other resource constraints, habits or the perceived benefits of an immediate and visible output, or more realistically a dynamic mix of the above factors.

ii. Opportunities for increased use of behavioural science

The challenges facing the public health system today are complex and it was recognised that behavioural science could provide a structured approach to identifying and prioritising behaviours as the focus of public health policies and interventions. With an increased focus on whole system approaches to public health, identifying where to best intervene in a system can be complexBehavioural science could support an evidence informed approach to selecting target behaviours and target populations and thus increase the likelihood of achieving the desired outcome.

Frameworks such as COM B could also enable a more structured approach to public engagement and ensure that problems are fully explored before considering solutions. Such approaches could also encourage increased collaboration and co-production with both the public and other professionals.

This work has confirmed a strong desire to advance the use of behavioural science by ensuring that behavioural insights are used to inform the development and delivery of interventions. This would help in ensuring that barriers to a target behaviour, as identified within the insights, are addressed by the intervention and that the most appropriate intervention type is selected.

The contribution of behavioural science in optimising outcomes would be more effective if considered at the start of, and through the full delivery cycle, of a project. Integrating behavioural science into organisational/annual planning and project planning would ensure opportunities are identified and instigated from the offset.

iii. Identifying practice related behaviours to support increased use of behavioural science

Identifying, selecting, and specifying the behaviour to be changed is a critical stage in developing behaviour change interventions. Without a thorough and accurate understanding of the problem, we are less likely to develop appropriate interventions and thus less likely to achieve the desired outcomes. The more we understand a behaviour, the better able we are to develop interventions and policies that will be effective in influencing the target behaviour. Understanding the improvements to practice that are required to enable increased routine application of behavioural science was therefore explored with stakeholders. The practice related behaviours identified within the interviews, focus group, and workshops are summarised below:

Practice related behaviours that could support increased, routine application of behavioural science

- Identify if, when, and how, behavioural science can support a piece of work
- Undertake behavioural systems mapping for key areas of work
- Identify and specify the behaviours that we want to influence
- Identify and specify priority populations
- Review current initiatives/interventions to see how behavioural science could improve them
- Understand the barriers to a behaviour before identifying solutions
- Use the COM B model as a structure for engaging with the public/partners
- Utilise behavioural insights to develop interventions
- Use the COM B model to tailor interventions to local need
- Use behavioural science to inform evaluation of interventions
- Co-create interventions with the public/partners
- Influence others to apply behavioural science in their work
- Share behavioural science practice, and lessons learnt, across the team

iv. Conducting a behavioural diagnosis using the COM-B model

To better understand the drivers of the above practice related behaviours, insights gained from both the qualitative and quantitative methods were mapped to the COM-B model. A summary of the quantitative data gained via the survey is provided below in Table.2. The table provides an overview of the statements, based on the Theoretical Domains Framework, along with the total scores for each rating of the Likert scale. Qualitative data from the interviews, focus group, workshops, and survey was categorised as either a barrier or a facilitator to behavioural science application and then mapped to the COM B model as summarised in Table.3.

Table.2. Quantitative data from the survey mapped to the TDF (N = 23)

COM B	TDF	Survey Question	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Psychological Capability	Knowledge	I have a good knowledge of behavioural science **THEORY**	4.0%	**68.0%**	8.0%	16.0%	4.0%
		I know **WHY** it is important for effective behaviour change	24.0%	**68.0%**	4.0%	4.0%	0.0%
	Skills	I know how to **APPLY** it on a practical level (e.g., using a framework)	8.0%	**44.0%**	24.0%	16.0%	8.0%
		I have had the opportunity to **PRACTICE** applying behavioural science regularly	0.0%	24.0%	24.0%	**48.0%**	4.0%
		I have had sufficient **TRAINING** in the theory and application of behavioural science approaches	4.0%	32.0%	20.0%	36.0%	8.0%
	Memory, attention, and decision processes	Using behavioural science approaches in my work is too **MENTALLY EFFORTFUL**	0.0%	4.0%	32.0%	**44.0%**	20.0%
		I make a **CONSCIOUS DECISION** to use behavioural science approaches	13.0%	**34.8%**	26.1%	17.4%	8.7%
Reflective Motivation	Social/ professional role and identity	Using behavioural science approaches is part of my **JOB ROLE**	8.7%	**39.1%**	**30.4%**	17.4%	4.3%
		Using behavioural science approaches is an **OPTIONAL** 'nice to have' rather than a 'need to have'	0.0%	13.0%	34.8%	**39.1%**	13.0%
	Beliefs about capabilities	I feel **CONFIDENT** in applying behavioural science approaches in my work	8.7%	**39.1%**	17.4%	26.1%	8.7%
		I believe I have sufficient **CAPABILITIES** to use behavioural science approaches	4.3%	**65.2%**	26.1%	0.0%	4.3%
	Optimism	I have seen lots of **EXAMPLES** where behavioural science has been used with successful outcomes	4.3%	**47.8%**	8.7%	30.4%	8.7%
	Beliefs about consequences	I recognise the **VALUE** of using it in my work	**40.0%**	**40.0%**	8.0%	8.0%	4.0%
	Intentions	I **INTEND** to use behavioural science approaches in the future	26.1%	**47.8%**	17.4%	4.3%	4.3%
	Goals	I do not know where to start and what the **STEPS** would be in terms of applying behavioural science	8.7%	26.1%	8.7%	**39.1%**	17.4%
Automatic Motivation	Reinforcement	I believe using behavioural science approaches is/would be **REWARDING** for myself and the communities we serve	26.1%	**47.8%**	21.7%	4.3%	0.0%
	Emotion	Using behavioural science models and frameworks is too **COMPLEX** and difficult	0.0%	4.0%	**52.0%**	32.0%	12.0%
Physical Opportunity	Environmental context and resources	I have enough **TIME** to apply behavioural science approaches in my work	8.0%	20.0%	**40.0%**	24.0%	8.0%
		I need more **LEADERSHIP SUPPORT** to integrate behavioural science approaches in my work	4.3%	**56.5%**	26.1%	8.7%	4.3%
		I have access to **RESOURCES** needed to use behavioural science approaches (e.g., guidance, templates, case examples)	0.0%	13.0%	26.1%	**52.2%**	8.7%
Social Opportunity	Social influences	I work with **OTHERS** who use behavioural science approaches in their work	0.0%	**64.0%**	12.0%	20.0%	4.0%
		I have sufficient **SOCIAL SUPPORT** from colleagues and leaders to use behavioural science approaches	4.0%	**44.0%**	24.0%	24.0%	4.0%

Insights collated via quantitative methods

The data indicates that a range of capability, opportunity, and motivation factors influence behavioural science application within public health practice. Low skills and confidence, lack of time and leadership support, and lack of access to resources are identified as barriers. Whilst good knowledge, recognition of the value and importance of behavioural science and intention to apply it in practice are rated highly amongst respondents and could act as enablers to increased application of behavioural science approaches. Scores of interest are highlighted within the table and discussed further below:

Using the COM B model to understand the insights

Psychological capability

Psychological capability refers to awareness of the behaviour, understanding how and why to perform it, and having the psychological skills and judgement to adopt it. From those who completed the survey, 72% agree or strongly agree that they have good knowledge of behavioural science theory and 92% express that they know why it is important. Greater diversity in skill is reported with just over half of respondents reporting that they know how to apply behavioural science in practice, a quarter don't know how to apply it in practice and a quarter neither agree nor disagree.

52% feel that they haven't had the opportunity to practice applying behavioural science which may be due to lack of understanding of when and how behavioural science can enhance practice as identified in the qualitative insights. Lack of training also appears to be a barrier with 44% feeling that they haven't had sufficient training. In relation to memory, attention, and decision processes, scores are again quite varied with a greater percentage of respondents rating 'neither agree nor disagree.' Limited knowledge, understanding, and experience of applied behavioural science may have impacted on ability to accurately rate these items.

Reflective motivation

Reflective motivation involves our conscious thought processes; planning, making evaluative judgement, and deciding whether we should adopt the behaviour. 70% of respondents report having sufficient capabilities but only 48% feel confident in applying behavioural science. Just over 50% perceive behavioural science to be part of their role and a 'need to have' rather than 'nice to have.' Notably, just over a third are unsure whether the approach is optional which may again be linked to limited understanding of the role of behavioural science within public health policy and practice. 39% haven't seen examples modelling how behavioural science has been used with successful outcomes. Factors that could act as enablers include the current recognition of the value of behavioural science (80%) and intentions to apply the approach in the future (74%).

Automatic motivation

Automatic motivation involves our emotions, our habits, and our instincts. 74% agreed/strongly agreed that using behavioural science is rewarding both for themselves and the communities they service. Scores relating to the complexity of the approach were more diverse with 52% neither agreeing nor disagreeing which again may be impacted by limited understanding and experience of using behavioural science.

Physical opportunity

Physical opportunity relates to time and the objects, materials, and spaces in our external environment. Time is perceived as a barrier to the use of behavioural science with 30% stating that they don't have sufficient time and 40% neither agreeing nor disagreeing. Access to resources and lack of leadership support are also identified as important factors that could impede application of behavioural science with 61% stating they need more leadership support and 61% reporting that they don't have access to the required resources.

Social opportunity

Social opportunity relates to the people, groups, and organisations with whom we interact, directly or indirectly. There appear to be some social norms relating to the use of behavioural science, with 64% stating that they work with others who are applying this approach. Though perceived social support from colleagues and leaders is mixed with 48% reporting adequate support, 28% not receiving adequate support, and 24% neither agreeing nor disagreeing.

Table.3. Qualitative data from the interviews, focus group, workshops, and survey mapped to the COM B model (N = 96)

COM-B component	Barriers	Facilitators
Psychological capability	• Limited understanding of behavioural science • **Limited knowledge of when/how to apply behavioural science** • **Limited skills to support application of behavioural science** • No experience of applying behavioural science • Focus on attitudes and beliefs rather than behaviours • Behavioural science seen as a 'thing' rather than an approach • Believe already using behavioural science when may not be – sometimes assume a behavioural science underpinning when behaviour isn't the focus • **Belief that behavioural science only relates to individual level change** • Assumption that behavioural science is all about communications/social marketing • Assumption that behavioural science is done to rather than with – focus on nudges • **Difficulties in identifying and prioritising target behaviours and target groups contributing to complex public health problems** • Lack of understanding of the potential of behavioural science to optimise impact • **Unaware of gaps in skills and knowledge** • **Unable to identify opportunities to apply behavioural science** • Unsure how to integrate behavioural science with other approaches e.g., whole system approach • Perceived conflict between behavioural science and whole systems approach	• Guidance/advice on when behavioural science can enhance practice • **Examples of applied behavioural science** • **Clarity on the knowledge/skills/ competences required for different public health professionals** • Clarity on what practitioners/leaders need to do to routinely apply behavioural science • **Increased understanding of when and how behavioural science can be applied** • The ability to determine when it's the best approach and when it might not be • Competency framework outlining required knowledge, skills, and competences • **'How to' resources (e.g., Tools to guide collation of insights/to help in identifying target behaviours, and to show how to use insights to inform intervention development)** • Understanding that behavioural science might not always provide a quick win, but is also not hugely laborious • **Training that focuses on changing practice and not just increasing knowledge and understanding**

Social opportunity	• **Colleagues/partners willingness and/or ability to use, support and promote this way of working** • Lack of understanding amongst colleagues/partners • **Social norms – focus on solutions before fully understanding the problem** • **Reactive/fast paced way of working** • Priorities/activity decided by senior managers • Focus on targets rather than behaviours • Personal opinions/bias can influence decision making/ priority setting • Projects are sometimes run without good data being collected, which results in recurring projects that don't result in change • Some projects must be done quickly and with a broad brush • Not given time in job plans to engage in quality improvement activities and methods can be a bit 'haphazard' • There is silo working in some organisations, which can make it difficult • Limited influence in deciding how work is prioritised/ undertaken	• Receive support from peers/partners in considering target behaviours and target populations • Sharing of practice and learning within and between teams • **Support from senior managers in ensuring/ allowing time to apply behavioural science** • **Engaging with and influencing colleagues and partners in adopting a behavioural science approach** • **Access to a support network/community of practice** • Connection with academic experts and partners • **Leadership support/advocacy/influence**
Physical opportunity	• **Limited time/capacity** • Conflicting/competing priorities • Availability of quality data and intelligence specifically in relation to lower geographical areas • **Lack of real world, relatable examples** • No access to behavioural science expertise • Lack of in-house capability/expertise	• **Access to tools, resources, and templates to support behavioural science application** • Protected time/time to apply behavioural science • **Access to behavioural science expertise** • **Access to training and development opportunities** • A process that allows for quick implementation i.e., there is not always time to wait for reports and research • Dedicated behavioural science roles • Budget allocated to behavioural science • **Examples of how behavioural science has been used in other projects to enable generalisation to a new problem or the same problem in a different context**
Reflective motivation	• **Low confidence in ability to apply behavioural science** • Difficult to see the impact of behavioural science approach as often focusing on long term outcomes • Perceived credibility/bad press • Perceived relevance to role • Perception that its 'another thing to do' • Perceived lack of robust evidence demonstrating the impact of behavioural science	• Belief that behavioural science will enhance practice • Intentions to increase behavioural science application in the future • Encourage people to start small and grow confidence and practice •
Automatic motivation	• **Habit of jumping to solutions before fully understanding the problem** • Thinking we already know the answers • Uncomfortable focusing on the individual • Frustration around lack of capacity/limited influence	• Create a habit of applying behavioural science • **Prompts to consider behavioural science within tools and processes** • **Embed behavioural science from the start of the project (include in PID)** • Embed behavioural science within PHW guidance/approaches e.g., WSA, WDoH, QI

*The factors highlighted in bold are those that were most frequently identified as drivers within the interviews, focus group, workshops, and qualitative survey questions.

Insights collated via qualitative methods

In alignment with the quantitative data, the insights gained through qualitative methods also identify a range of influences on the use of behavioural science including capability, opportunity, and motivation factors. Themes identified within the data have been highlighted in bold in Table.3. and are described in more detail below.

Using the COM B model to understand the insights

Psychological capability

Self-reported knowledge and experience of behavioural science varies greatly within and between the different stakeholders who engaged in this project. Generally, individuals report a basic level of knowledge but feel lacking in skills that would enable use of behavioural science approaches. This reinforces the need to consider not only knowledge but also the practical skills required to translate and apply this knowledge appropriately and effectively. Interestingly, during workshops there was recognition from some that initial perceptions of personal knowledge was not as good as they first thought with practitioners commenting that they are not always aware of 'what they don't know.' They felt that their awareness of their own skills and knowledge was more accurate following the introductory training session on behavioural science. The lack of a common understanding of the definition of a behaviour was also apparent through engagement with stakeholders.

Challenges in determining when, and how, behavioural science could enhance practice is also a common barrier identified by stakeholders. Additionally, there was some perception that behavioural science relates solely to individual behaviour change, rather than also covering system/population level interventions. This could be influencing beliefs about the relevance of behavioural science to public health (in terms of population level improvement) and thus be contributing to missed opportunities to apply the approach. Challenges in determining target groups and target behaviours for complex public health problems such as obesity and climate change is frequently reported. Stakeholders express that due to the vast range of behaviours and actors contributing to these problems, it can feel overwhelming and difficult to know where to focus time and resources. This in turn could be reinforcing the belief that behavioural science is more appropriate when focusing on individuals behaviours.

Social opportunity

A common theme relating to social opportunity is the culture within teams and organisations; stakeholders report that due to the reactive, fast paced way of working there is a tendency to jump to solutions before fully understanding the problem. This is in direct conflict with the systematic approach underpinning behavioural science and can lead to less effective interventions and policies. Additionally, with a greater focus on systems approaches within public health, the role of partners across the health and care system is identified as a driver of applied behavioural science. Stakeholders express that it can be difficult to promote this way of working when there is a low awareness and/or will amongst partners especially when they themselves lack confidence in their own skills in applied behavioural science.

Some practitioners expressed limited influence in determining how work is prioritised and delivered, due to this being decided by senior colleagues, which they felt could act as a barrier to the routine use of behavioural science. A focus on activity-based targets, as opposed to behavioural outcomes, and difficulty in collating/accessing good quality data were also identified barriers. Leadership support in ensuring time and space to fully consider the role of behaviours and to apply a systematic approach was suggested as a strong enabler.

Physical opportunity

The main barrier relating to physical opportunity was limited time and resources and concerns about capacity for application of behavioural science approaches. Further exploration of this suggests that time restraints are exacerbated by the fast pace of work and perceptions that applied behavioural science can be lengthy and resource intensive. Guidance on how the approach be adapted and applied relative to the time and resources available could help to address this and thus enhance practice.

A lack of real world, relatable examples demonstrating how behavioural science can be applied to a range of public health problems was also a common barrier reported by stakeholders. It was reinforced that such case studies need to reflect the diversity and complexity of public health policy and practice and should demonstrate the methods, outcomes, and impact of behaviourally informed interventions.

Limited in-house capability was also identified as a barrier, for some this related to a lack of expertise and for others the available capacity of those with behavioural science expertise. Further exploration of the support required from in house expertise suggests that this relates to training provision, technical advice, and guidance, and a 'critical friend' to sense check how the approach is being applied.

Reflective motivation

There was generally a consensus amongst stakeholders that behavioural science can enhance practice with high intentions to apply this approach in the future. Perceptions around the relevance of behavioural science to professional identify were mixed across stakeholder groups with some believing that it should underpin all their work and others feeling it is only appropriate in specific circumstances. Low confidence in own abilities to use behavioural science was the main barrier reported in relation to conscious thought processes.

An additional factor discussed relates to the challenges in measuring and demonstrating the impact of behaviourally informed interventions which can influence perceptions of the effectiveness of the approach. There is consensus that more needs to be done to evidence how behavioural science has optimised the impact of public health interventions, policies, and services.

Automatic motivation

As highlighted within social opportunity factors, there was recognition that there is a tendency to jump to solutions before fully understanding the problem and practitioners reflected that although they are aware of the implications of this, it has become an established habit. There was a strong to desire to challenge this way of working and to focus more on understanding the behaviour of interest but with the recognition that this takes conscious effort and could be challenging due to the other barriers identified. Some practitioners also expressed frustration at the conflict between their desire to embed behavioural science in practice and their limited ability to influence ways of working and the culture in which they operate.

Conclusions

The insights gained through engagement with stakeholders has highlighted that there is a huge appetite for embedding behavioural science within public health policy and practice across Wales. There is already strong recognition of the value of applying the approach with good intentions to use the methodology in the future. The main barriers identified include a lack of understanding as to when and how behavioural science can enhance practice, lack of clarity on the skills and knowledge required to embed it into practice, low confidence in its application, time restrictions, lack of access to resources, varied leadership support, reactive and fast paced way of working, and the habit of jumping to solutions before fully understanding the problem, from a behavioural perspective. This reinforces the importance of not only empowering individuals to enhance their capability but also considering the wider context in

which public health practitioners operate and how culture and social systems can influence practice. This is particularly important considering the shift towards systems approaches and the need for more collective and collaborative efforts in addressing public health challenges.

Welsh Government have recently funded a similar small piece of work exploring civil servants' perceptions of behavioural science and its potential role with a view to understanding the barriers and opportunities to wider use of behavioural approaches in policy development. Despite the different target group, similar barriers were identified including varied levels of knowledge and skill in behavioural science, limited training, lack of access to guidance and support, concerns regarding time and capacity, and the need for a supportive working environment (Callaghan, 2022). These parallels provide an opportunity to work collaboratively across the system in a collective effort to enable increased capability, opportunity, and motivation for the routine use of behavioural science.

Recommendations

The insights collated indicate that increasing the application of behavioural science within public health policy and practice requires changes across the PH system at the organizational, team, and individual level. Informed by the COM-B model and Behaviour Change Wheel, several potential intervention options that are likely to support system change, are offered in Table 4. (Michie, Atkins, & West, 2014). As the current findings are based on the perspectives of public health practitioners, the recommendations are focused on interventions pertinent to this stakeholder group.

Table.4. Recommendations for addressing the barriers informed by the Behaviour Change Wheel (BCW)

BCW Intervention options	COM B factors that can be addressed by the intervention	Objectives of the intervention
Education	**Psychological Capability** **Reflective Motivation**	**Provide access to training and education to increase knowledge of behavioural science approaches including when and how they can enhance policy and practice.** **Develop skills in the practical application of behavioural science. This will help in building confidence and managing time demands by showing how the approach can be adapted in response to the time and resources available.** **Developing skills and confidence will in turn help to strengthen habitual engagement in the use of behavioural science.**
Training	**Psychological Capability** **Physical Opportunity** **Automatic Motivation**	
Environmental Restructuring	**Physical Opportunity** **Social Opportunity** **Automatic Motivation**	**Provide cues and prompts to encourage use of behavioural science within public health systems and processes.** **Integrate behavioural science into public health planning documentation.** **Facilitate access to behavioural science expertise.**
Modelling	**Social Opportunity** **Automatic Motivation**	**Collate and disseminate case studies of applied behavioural science highlighting both the methodology and impact of behavioural science approaches.** **Facilitate sharing of practice within and between teams/ organisations.**
Enablement	**Psychological Capability** **Physical Opportunity** **Social Opportunity** **Automatic Motivation**	**Enable access to behavioural science tools, guidance, and resources.** **Establish a community of practice through which practitioners can share experiences and learning.**

Implementing the recommendations

Whilst undertaking the activity summarised within this report, the Behavioural Science Unit has been developing and delivering a programme of work in response to requests made by the public health workforce. A summary of this work, and its connection to the recommended intervention options, is provided below:

To date, the behavioural science unit has:

Enablement:

Developed and published several resources including:
- 'Improving well-being: A Guide to Using Behavioural Science in policy and practice' in Wales
- 'Responding to the climate crisis: applying behavioural science: a guide to increasing the likelihood of achieving positive climate behaviours'
- A guide to developing behaviourally informed communications'
- An online repository to host behavioural science tools and resources

Education and training:

Developed a behavioural science competency framework in collaboration with Bangor University. The framework is informed by the Public Health Skills and Knowledge Framework (PHSKF) and details the knowledge, skills, and competences required to enable application of behavioural science across the varying domains of public health practice.

Current activity includes:

Enablement:

Co-producing resources with key stakeholders; tools in development include:
- An online Discovery Tool to guide exploration of policy, service, or communication problems
- An interactive guide on 'Identifying, selecting, and specifying target behaviours and target populations
- An interactive guide on 'Collating behavioural insights'

Enablement/Modelling

Establishing a behavioural science Community of Practice for Wales in collaboration with the Behavioural Science and Public Health Network. As of May 2023, 152 people have joined the CoP.

Modelling:

Identifying, summarising, and disseminating case studies of applied behavioural science.

Planned activity:

Education:

Develop a series of modular webinars to support implementation of 'Improving well-being: A Guide to Using Behavioural Science in policy and practice' in Wales

Training:

Deliver or commission skills-based training for public health practitioners in applied behavioural science.

- **Education and training:**

In collaboration with Bangor University, and informed by the behavioural science competency framework, develop a series of learning pathways for the development of skills, knowledge, and competences to enable routine application of behavioural science for better health. Due to the diversity of roles, capability, and capacity across the public health workforce, defining precisely whom needs to know what has proved challenging. A modular approach will enable individuals and/or teams to select and engage in training and development opportunities responsive to their individual roles and personal needs.

- **Explore the experiences:**

Further explore the experiences and needs of public health leaders specifically in relation to the level of knowledge and skill they require to be able to effectively advocate for the use of behavioural science and how they can enable a working environment that supports practitioners in embedding this approach in practice.

- **Environmental restructuring:**

Explore if and how behavioural science methodology can be embedded within Public Health Wales systems and processes, for example including prompts within Project Initiation Documentation.

- **Environmental restructuring:**

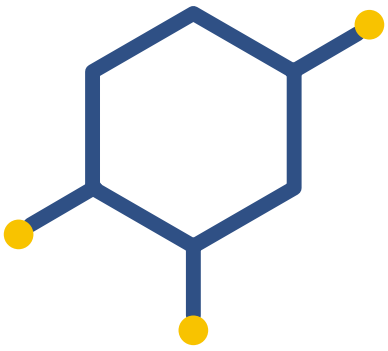
Explore if and how behavioural science can be integrated/aligned with other key approaches and included in strategy documents and guidance, for example Wider Determinants of Health, Quality Improvement, Whole Systems Approaches, and Research and Evaluation.

To further support the assessment and development of behavioural science capability across Wales, the behavioural science unit will also be undertaking an assessment against the World Health Organisation (WHO) Action Framework, which will be used by WHO and Member States (MS) to measure and document progress in the application of behavioural and cultural insights (BCI) for better health in the WHO European Region. The unit also plans to develop a strategic plan for the application of behavioural science for better health in Wales.

Gaps and limitations

It is important to recognise several potential limitations of this work; firstly, the insights are based on self-reported information and as identified by practitioners, perceptions of own abilities are not always accurate. Secondly, the small sample size for the survey may suggests that the data is not representative of the public health workforce. However, when synthesized with the qualitative data, rich insights are provided with strong, common themes emerging across the various data sources.

Additionally, as already highlighted, the insights gained are primarily from those working within practitioner roles with limited representation of managers and leaders. Further engagement is required to better understand the views, experiences and needs of those working within public health leadership roles.



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Appendices

Appendix I: Interview questions

QUESTION	NOTES
Tell me a little bit about your interest in BehSci and what it would add for your organization.	
What was your experience of using behavioural science like?	
WHO would be using BehSci in your organization?	
With regard to PROCESSES, what do these people need?	
With regard to TOOLS, what do these people need?	
With regard to SUPPORT, what do these people need?	
With regard to TRAINING, what do these people need?	
What are the tools you would need or have to evaluate the BehSci work (for effectiveness etc)?	
How confident are you about knowledge of evidence and theory (i.e., yours or other people in your organization)? What would you need to increase this confidence?	
The following questions have been derived from the WHO document on BI	
How confident do you feel in these stages of a BI project?: • Problem definition • Diagnosis and research • Intervention design • Monitoring and impact intervention • Scaling How would be responsible for each of these?	
If you could identify some early-win topics, what would they be? What do you think would be an ideal situaon that would enable you to get the most out of behavioural science?	

Appendix II: Focus Group Structure

Focus groups. Focus group sessions will be 60 min in duration and will include between two and seven participants. They will be delivered online (e.g., via Zoom). The structure of the focus groups will be underpinned by Nominal Grouping Technique (NGT; McMillan et al., 2016). Under NGT, there are the following elements to each session.

1. Introduction. The project and its aims are introduced. It will be reiterated (as per the information sheet) that the session will be recorded, and that all responses will be valued.

2. Silent idea generation. Participants will be asked to think about 1) how they would identify projects / tasks that could be conducted using behavioural science, 2) what the processes, tools, support, and training are that are needed to use behavioural science in their organisation. They will be asked to write them down.

3. Idea sharing. In a 'round robin', the facilitator will call upon each participant one at a time to share ideas. This will continue until everyone has shared all their ideas. As ideas are shared, they will be typed and displayed on the screen for participants to see.

4. Group discussion. The participants will be invited to discuss each of the ideas shared and displayed on the screen. During the discussion, the ideas will be organised by removing duplicates and grouped into themes. Any additional ideas generated by the group will be added. The Capabilities, Opportunities, Motivations, Behaviour (COM-B) model (Michie et al., 2011) provides a framework by which problems can be assessed and targeted interventions designed. Capabilities, opportunities, and motivation drive behaviour in different ways, and therefore interventions can be designed that target each of these drivers. Capability refers to a person's physical and psychological capacity to engage in the activity. Opportunities are in the environment and either prompt or enable the person to engage in the activity. Motivation is the individual factors that influence the person, including emotional responding and analytic decision making. The following are some prompt topics that can be raised for discussion in the event that participants are struggling to generate ideas or the conversation is not flowing

Capability	**Do you feel you have the skills and knowledge? What are the gaps in your skills and knowledge?** **Could behavioural science work be incorporated into your current work, or would it be 'additional'?** ***Physical capability is I have sufficient physical stamina, I can overcome disability, I have sufficient physical skills*** ***Psychological capability is having the knowledge, cognitive and interpersonal skills, having the ability to engage in appropriate memory, attention, and decision-making processes***
Opportunities	**Are there any system barriers such as lack of management support, lack of funding?** **What are some of the tools you would need (e.g., competence framework, training materials)?** ***Physical opportunities include sufficient time, the necessary materials, reminders*** ***Social opportunities include support from colleagues, managers***
Motivation	**Are there any personal objections you've encountered about behavioural science (e.g., are people concerned that it's just a 'fad')?** ***Have you experienced resistance (e.g., managers, colleagues, or other organisations) to using behavioural science?*** ***Motivation is I have the desire to, I feel the need to*** ***Automatic motivation is: 'is something I do before I realise, I'm doing it'***
The above questions are not an exhaustive list and can be phrased positively or negatively depending on the conversation tone and content.	

5. Prioritisation of themes. The themes will be placed into Mentimeter (an online collaboration tool), and participants will be asked to anonymously prioritise them based on their importance.

6. Final solicitation of thoughts. Is there anything we haven't asked you about that you think could be useful, important, or relevant?

7. Request for ongoing participation. Participants will be asked whether they are happy to support us in the development of resources or sense check any resources that may be developed as a result of this work. Participants who indicate their willingness will be noted.

8. Summary. Participants will be thanked for their participation and asked to share any final ideas or thoughts. The purpose of the insight project, uses of the data, and anonymity will be reiterated again.

Appendix III: Workshop plan

Agenda Item	Objectives
Welcome and introduction: Introduction to behavioural science and applied examples	**• Establish a common understanding of behavioural science • Develop knowledge of behavioural science and its role in public health • Share behavioural science case studies**
Share applied examples	**• Show case how behavioural science has been applied to public health issues**
Split into subgroups to discuss gaps and opportunities: *How is behavioural science currently being used within the team?* *How would you like to see behavioural science being used within the team?* Subgroups to nominate one person to feedback.	**• Understand how behavioural science is currently being applied • Consider how behavioural science could support the work of the team**
Group discussion	**• What factors could enable/prevent behavioural science being used within the team?**
Reflections and next steps	**• Summarise the activities/outputs from the session • Discuss and agree next steps • Share feedback/reflections on the session**

Appendix IV: Session plan for bespoke training session

		Objectives	BCTs
10.30am	**Welcome and introduction**	• Agree purpose of session and desired outcomes be reiterated again.	
10.45am	**Identifying behaviours and populations**	• Recap purpose and importance of clearly defining target behaviours and populations • Ensure a common understanding of what is and isn't a behaviour • Collaboratively identify behaviours/actors of behaviours within one of the WSA obesity sub system maps	• Information about health consequences • Information about social and environmental consequences • Instruction on how to perform the behaviour • Demonstration of the behaviour
11.30am	**Subgroup exercise on identifying behaviours and populations**	• Each subgroup to select one of the WSA obesity sub system maps and identify behaviours and actors within this • One group to identify behaviours and actors highlighted within the childhood obesity insights report • Each subgroup to share the behaviours and actors they have identified • Subgroups to share learning and reflections on the exercise	• Behavioural practice • Feedback on behaviour
12.15am	**Lunch**		
12.45pm	**Selecting behaviours, populations, and proposed interventions**	• Introduce APEASE criteria for selecting target behaviour(s) and populations / assessing proposed interventions • Provide an example of the application of APEASE criteria • Collaboratively apply APEASE criteria to sub system behaviours identified in the first exercise • Collaboratively apply APEASE criteria to an intervention recommended within the childhood obesity insight report	• Instruction on how to perform the behaviour • Demonstration of the behaviour
1.30pm	**Subgroup exercise on selecting behaviours, populations, and proposed interventions**	• Each subgroup to apply the APEASE criteria to the behaviours they identified within one of the WSA obesity subsystems and select their top 2 behaviours • One group to apply APEASE criteria to the behaviours identified within the childhood obesity insights report OR to interventions recommended within the report • Each subgroup to share the behaviours they have selected and their rationale for this/their assessment of recommended interventions and the best option based on their assessment • Subgroups to share learning and reflections on the exercise	• Behavioural practice • Feedback on behaviour
2.45pm	**Reflections and next steps**	• Review objectives of the session • Share learning and reflections • Consider how learning can inform future work • Identify how learning can be shared across the wider team • Discuss next steps: - Monitoring/capturing identification and prioritization of behaviours - Co-creation of a tool to support identification and prioritization of behaviours and populations	• Feedback on outcome of behaviour
3.30pm	**Close workshop**		

Appendix V: Survey questions

PHW Barriers and enablers to applying behavioural science for health and wellbeing

Barriers and enablers to applying behavioural science for health and wellbeing

Behavioural science has contributed to significant advances in a wide range of areas including transport safety, public health and clinical medicine, mental health, environmental protection, law and order, and defence. The Wellbeing and Future Generations Act (2015) sets ambitious goals for health and wellbeing in Wales; behavioural science can play a significant role in helping to achieve these along with additional local and national public health priorities. The Behavioural Science Unit has been charged with providing specialist expertise on behavioural science, and developing the application of it, to improve health & wellbeing in Wales.

What do we mean by behavioural science?

Behavioural science applies scientific methods to understanding and influencing behaviour. It involves gathering data, selecting, and applying appropriate models and theories, and using these to better understand behaviour in specific contexts. The application of behavioural science seeks to develop, deliver, and evaluate behaviour change interventions at individual, community, and population level. Behaviour change interventions involve activities, policies, products, and services designed to make a difference to the way people act.

What is the purpose of the survey?

The aim of this survey is to better understand the challenges that exist in applying behavioural science to improve and/or protect public health in Wales. Rather than making assumptions about the challenges, we want to learn directly from those working across the system in the hope we can better understand some of the barriers. Whether new to the field or a trained specialist in behavioural sciences we are interested in exploring the unique barriers to the application of behavioural sciences in your everyday practice. By identifying and better understanding such barriers we can then identify potential solutions to support the routine use of behavioural science. This in turn will support in optimizing the impact of interventions such as policies, services, and communications.

What happens next?

The responses from this survey will be mapped onto the COM-B Model of Behaviour Change and Theoretical Domains Framework (TDF). This will help to identify the physical, psychological, social, and environmental determinants of behaviour, to understand where the focus of future work to support behavioural science practice could and should be. We will then use this information to identify potential solutions to help address some of the issues identified.

Thank you for your time. Please do get in touch if you have any further feedback or suggestions about enhancing the application of behavioural science in improving health and wellbeing - nicky.knowles@wales.nhs.uk

What is your job title?

How would you describe your level of knowledge in behavioural science?

- ◯ None or very little knowledge
- ◯ Some basic knowledge
- ◯ Good level of knowledge
- ◯ Specialist level knowledge

How confident are you in applying behavioural science approaches in your role?

- ◯ Not at all confident
- ◯ Low confidence
- ◯ Confident
- ◯ Very confident

When thinking about your behavioural science knowledge and practice, please read the following statements and choose which answer applies to you:

Survey Question	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I have a good knowledge of behavioural science THEORY	○	○	○	○	○
I know WHY it is important for effective behaviour change	○	○	○	○	○
I know how to APPLY it on a practical level (e.g., using a framework)	○	○	○	○	○
I have had sufficient TRAINING in the theory and application of behavioural science approaches	○	○	○	○	○
I recognise the VALUE of using it in my work	○	○	○	○	○
Using behavioural science approaches in my work is too MENTALLY EFFORTFUL	○	○	○	○	○
I have the PHYSICAL SKILLS needed to be able to put it into practice	○	○	○	○	○
I have enough TIME to apply behavioural science approaches in my work	○	○	○	○	○
Using behavioural science models and frameworks is too COMPLEX and difficult	○	○	○	○	○
I have had the opportunity to PRACTICE applying behavioural science regularly	○	○	○	○	○
I work with OTHERS who use behavioural science approaches in their work	○	○	○	○	○
I have sufficient SOCIAL SUPPORT from colleagues and leaders to use behavioural science approaches	○	○	○	○	○

Survey Question	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I have access to RESOURCES needed to use behavioural science approaches (e.g., guidance, templates, case examples)	◯	◯	◯	◯	◯
Using behavioural science approaches is part of my JOB ROLE	◯	◯	◯	◯	◯
I feel CONFIDENT in applying behavioural science approaches in my work	◯	◯	◯	◯	◯
I make a CONSCIOUS DECISION to use behavioural science approaches	◯	◯	◯	◯	◯
Using behavioural science approaches is an OPTIONAL 'nice to have' rather than a 'need to have'	◯	◯	◯	◯	◯
I need more leadership SUPPORT to integrate behavioural science approaches in my work	◯	◯	◯	◯	◯
I do not know where to start and what the STEPS would be in terms of applying behavioural science	◯	◯	◯	◯	◯
I have seen lots of EXAMPLES where behavioural science has been used with successful outcomes	◯	◯	◯	◯	◯
I INTEND to use behavioural science approaches in the future	◯	◯	◯	◯	◯
I believe using behavioural science approaches is/would be REWARDING for myself and the communities we serve	◯	◯	◯	◯	◯
I believe I have sufficient CAPABILITIES to use behavioural science approaches	◯	◯	◯	◯	◯

What do you think are the TOP 5 BARRIERS (if any) that you experience in applying behavioural science in your role? (Please list the most significant barrier first). N.B. If you cannot think of 5, please list as many as you can.

Can you suggest 5 IDEAS OR STRATEGIES that could be used to overcome these barriers? (Please list the most useful or impactful idea first). N.B. If you cannot think of 5, please list as many as you can.

What else would support you in routinely applying behavioural science in your work?

Is there anything else you would like to add?

Thank you

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Canolfan Gydweithredol Sefydliad Iechyd y Byd ar Fuddsoddi ar gyfer Iechyd a Llesiant
World Health Organization Collaborating Centre on Investment for Health and Well-being

Uned Gwyddor Ymddygiad Behavioural Science Unit